

Figure 1

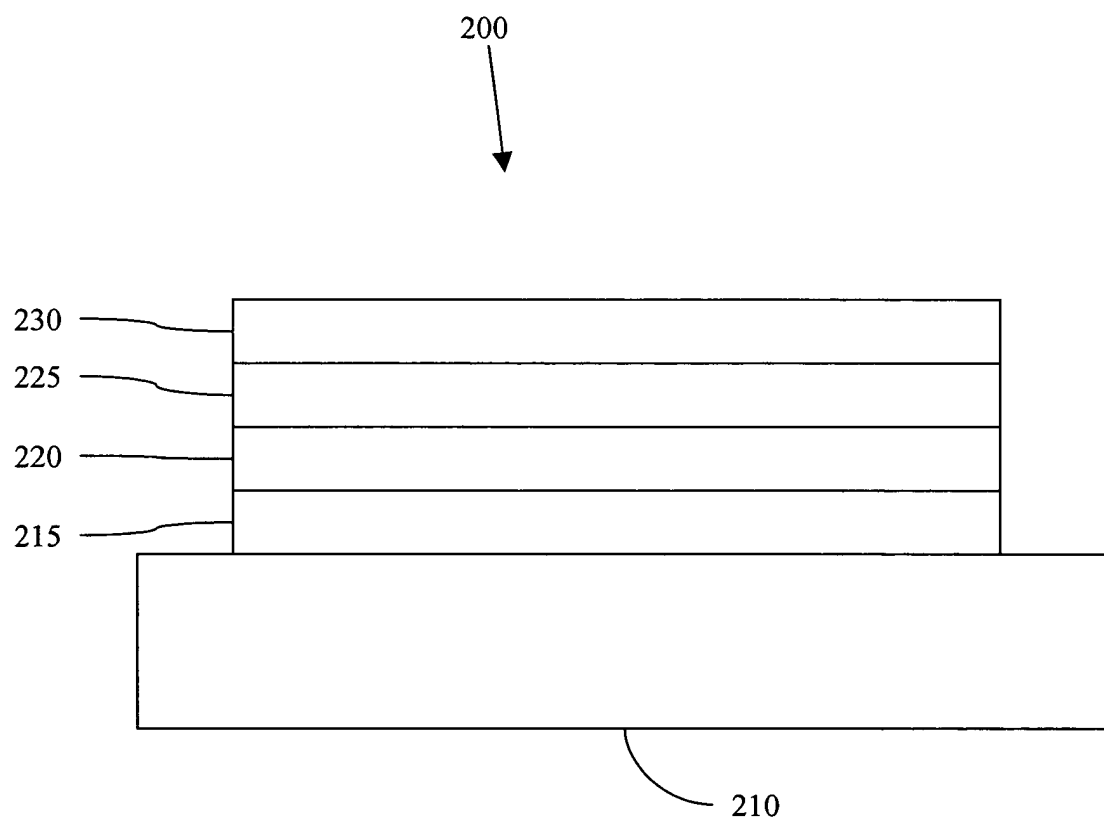


Figure 2

Figure 3

Electrochemistry: 5,5'-Spirobi(dibenzosilole)

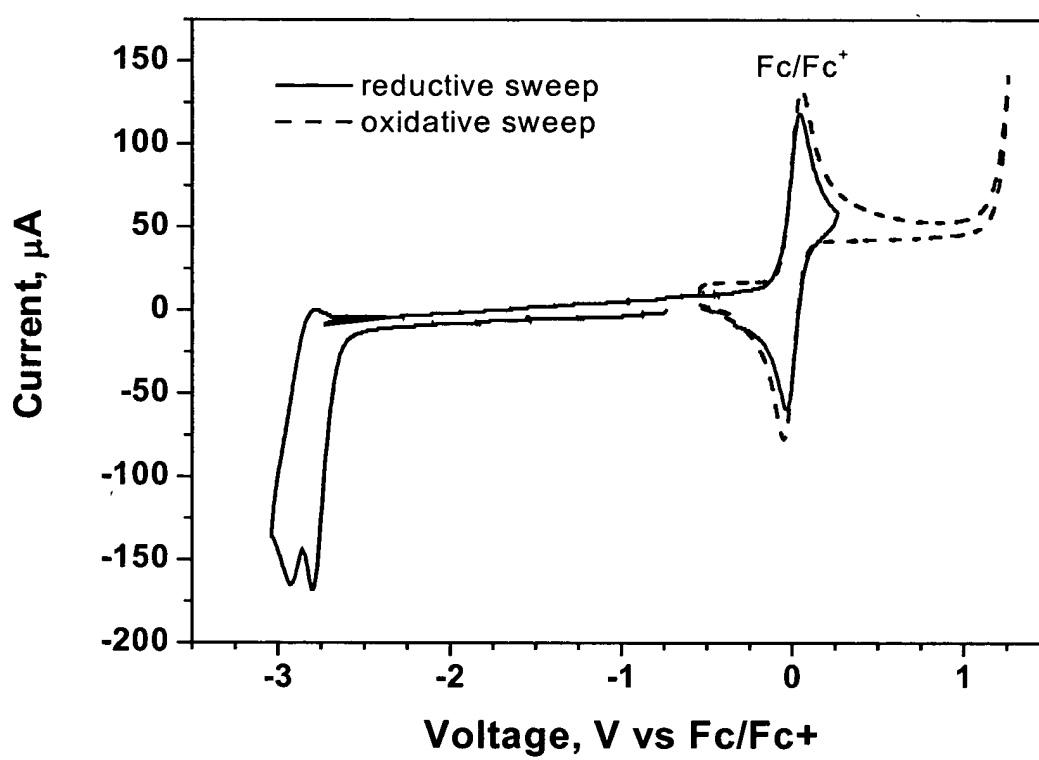


Figure 4

Absorption/Emission: 5,5'-Spirobi(dibenzosilole)

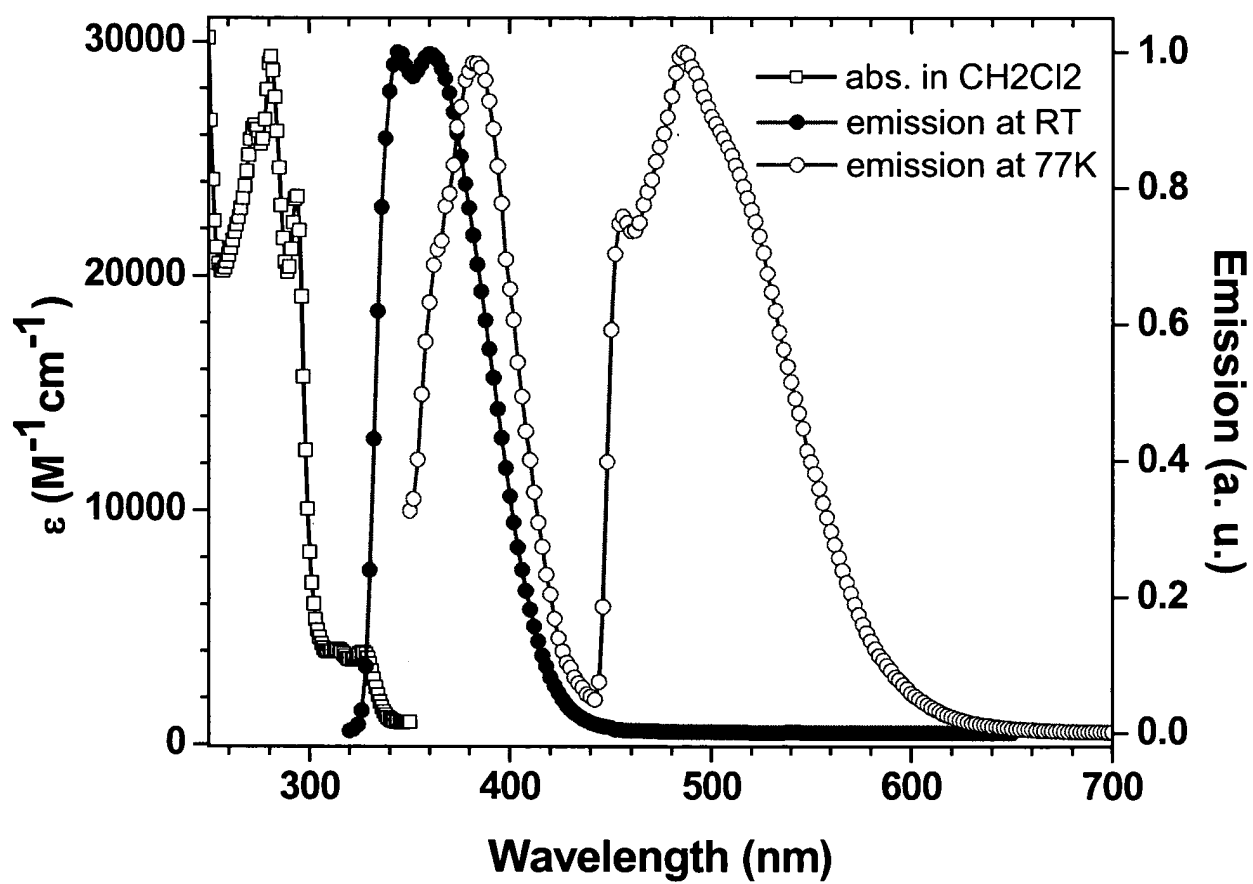


Figure 5

Device structure:

ITO/NPD(400Å)/Host:Irppy(300Å, 8%)/BCP(150Å)/Alq(150Å)/LiF/Al

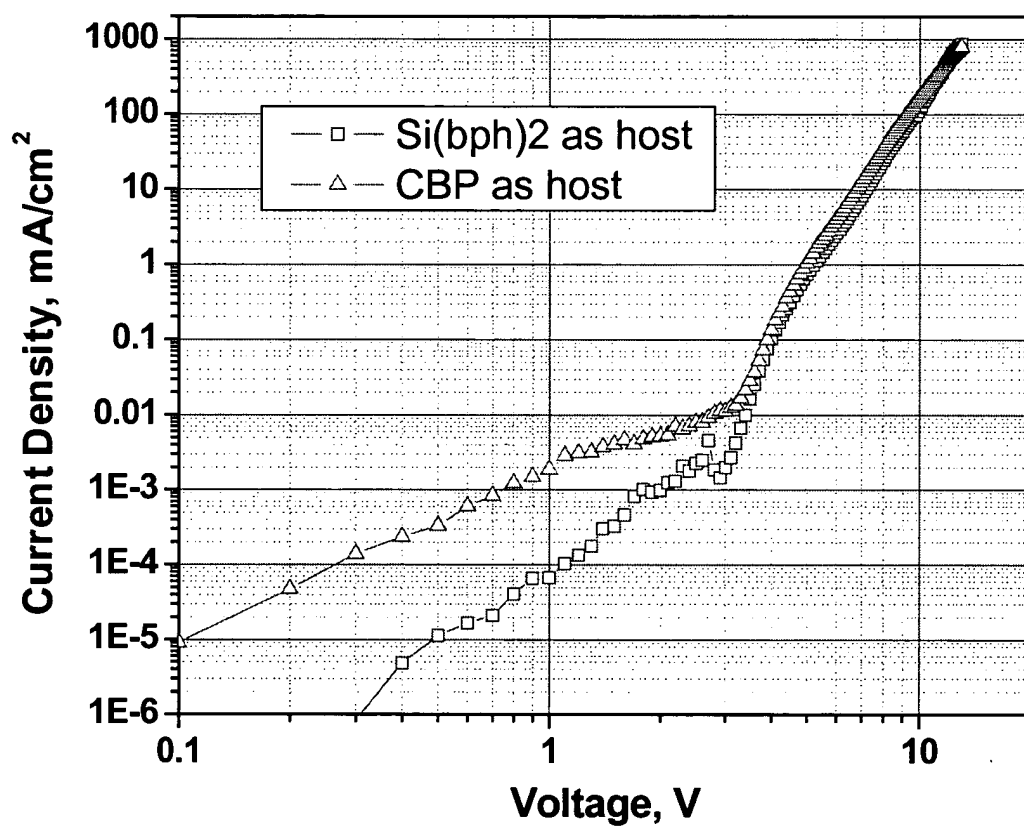


Figure 6

Device structure:

ITO/NPD(400Å)/Host:Irppy(300Å, 8%)/BCP(150Å)/Alq(150Å)/LiF/Al

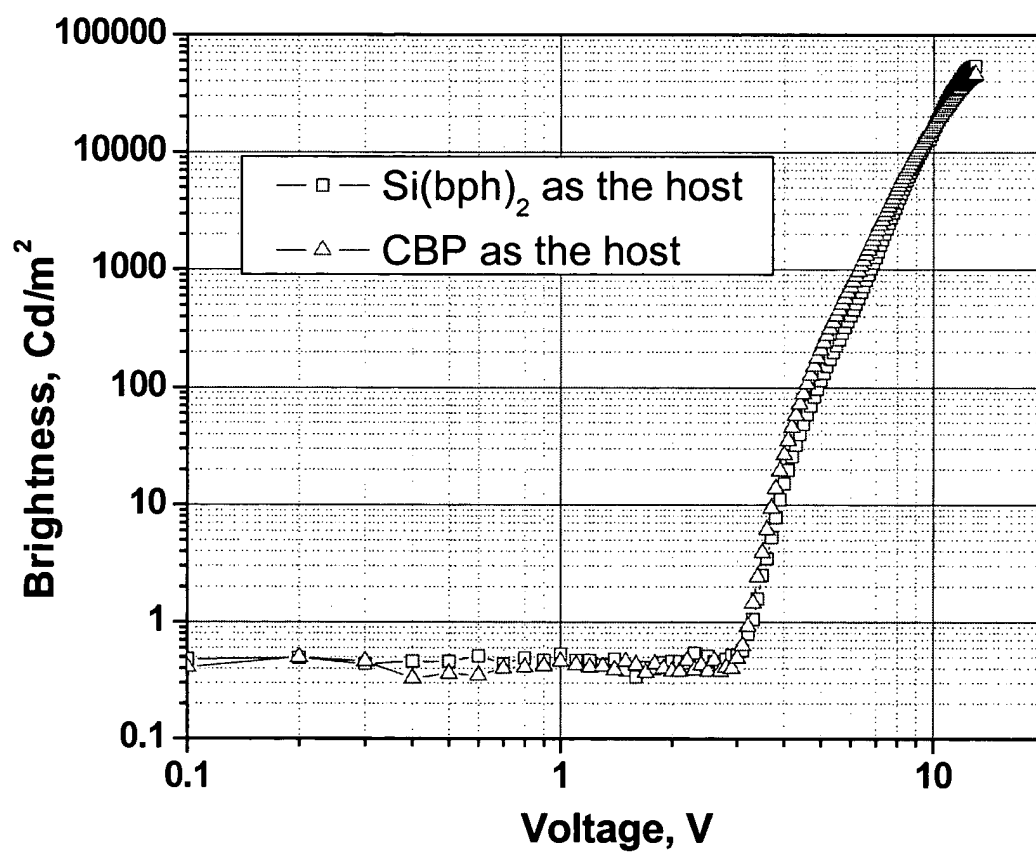


Figure 7

Device structure:

ITO/NPD(400Å)/Host:Irppy(300Å, 8%)/BCP(150Å)/Alq(150Å)/LiF/Al

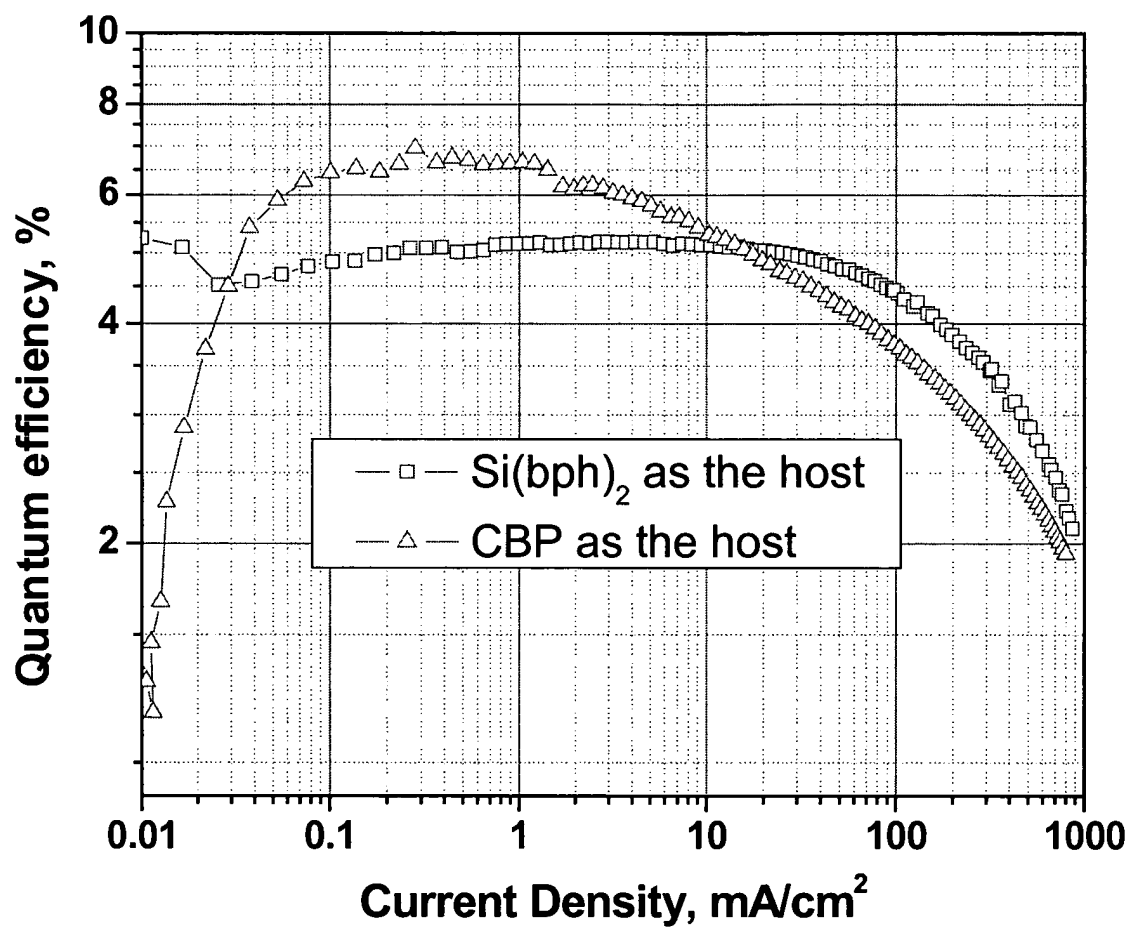


Figure 8

Absorption/Emission: Diphenyldi(*o*-tolyl)silane

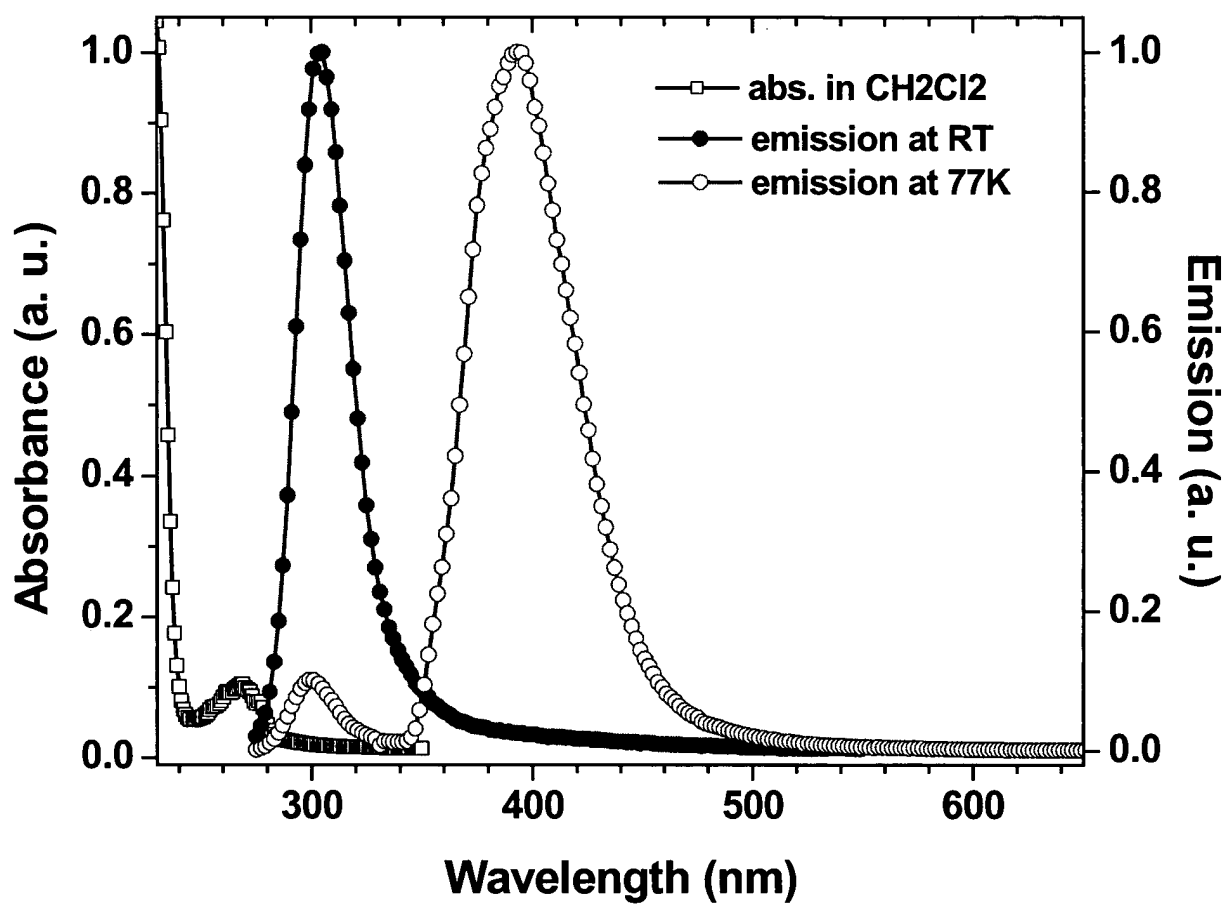


Figure 9

Device Structure:

ITO/NPD(400Å)/Irppy:host(8%, 300Å)/BCP(150Å)/Alq(250Å)/LiF/AI

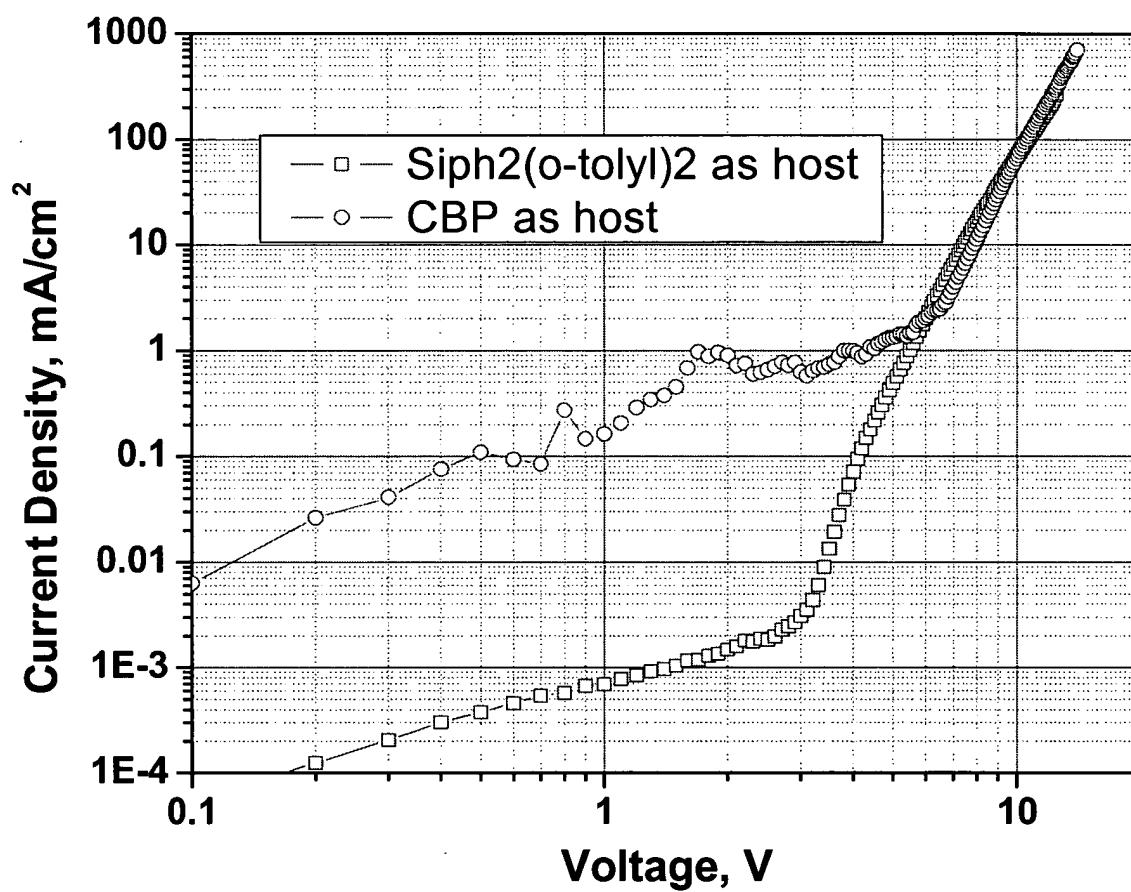


Figure 10

Device Structure:

ITO/NPD(400Å)/Irppy:host(8%, 300Å)/BCP(150Å)/Alq(250Å)/LiF/Al

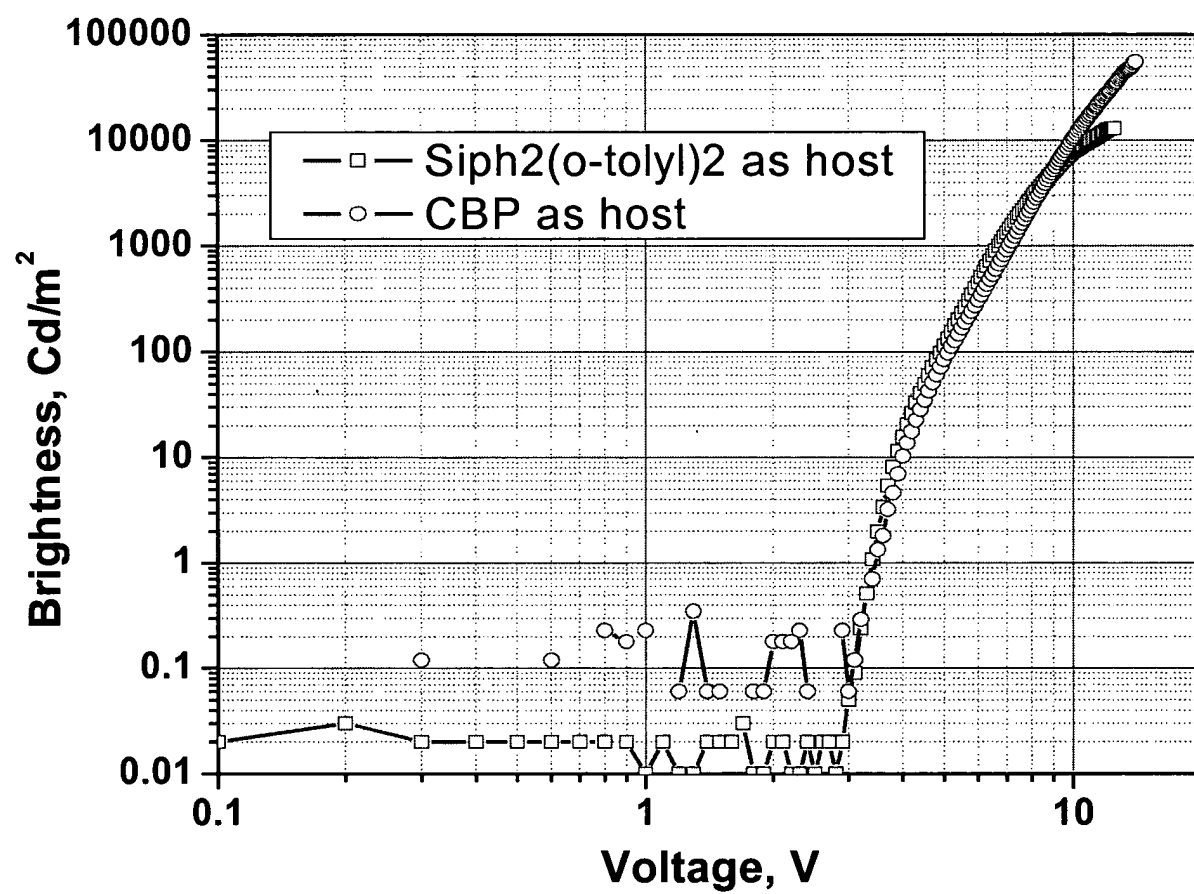


Figure 11

Device Structure:

ITO/NPD(400Å)/Irppy:host(8%, 300Å)/BCP(150Å)/Alq(250Å)/LiF/Al

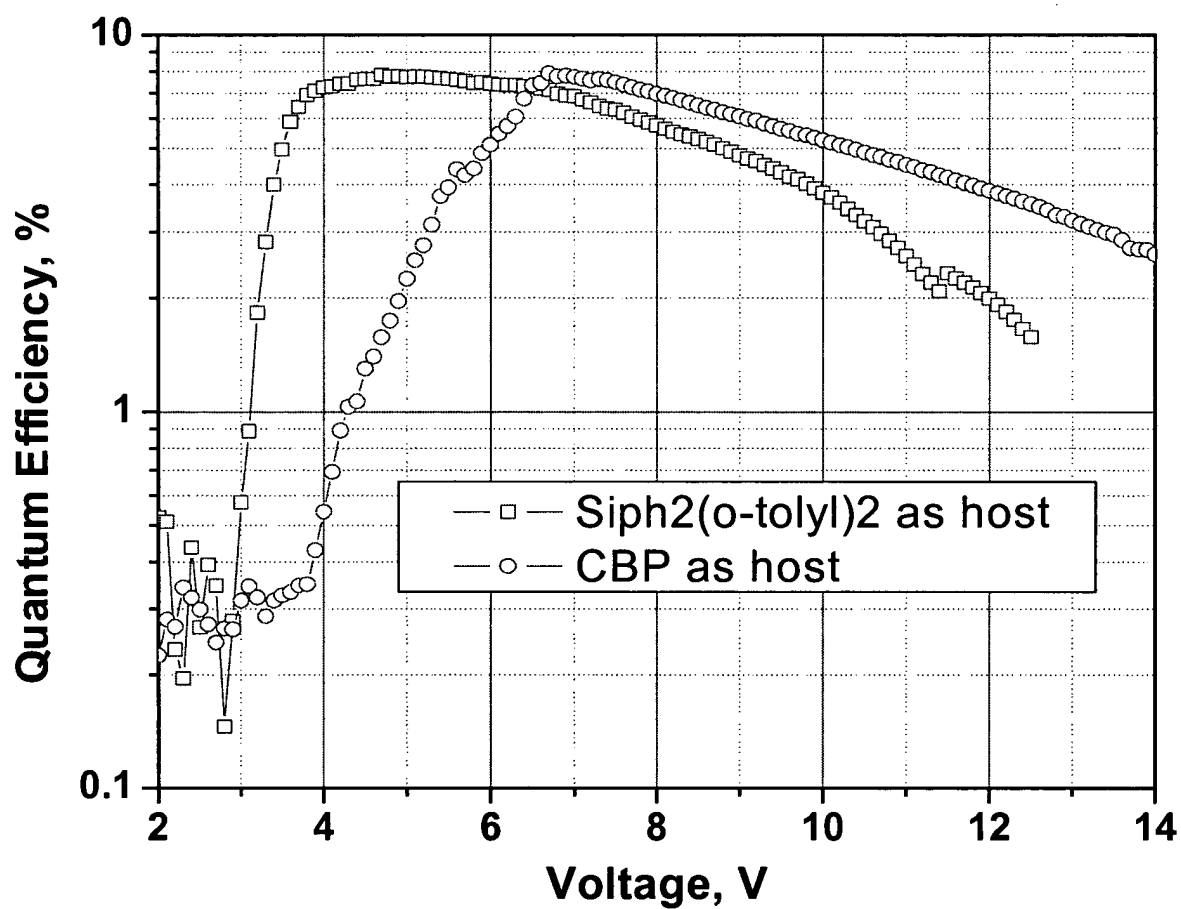


Figure 12

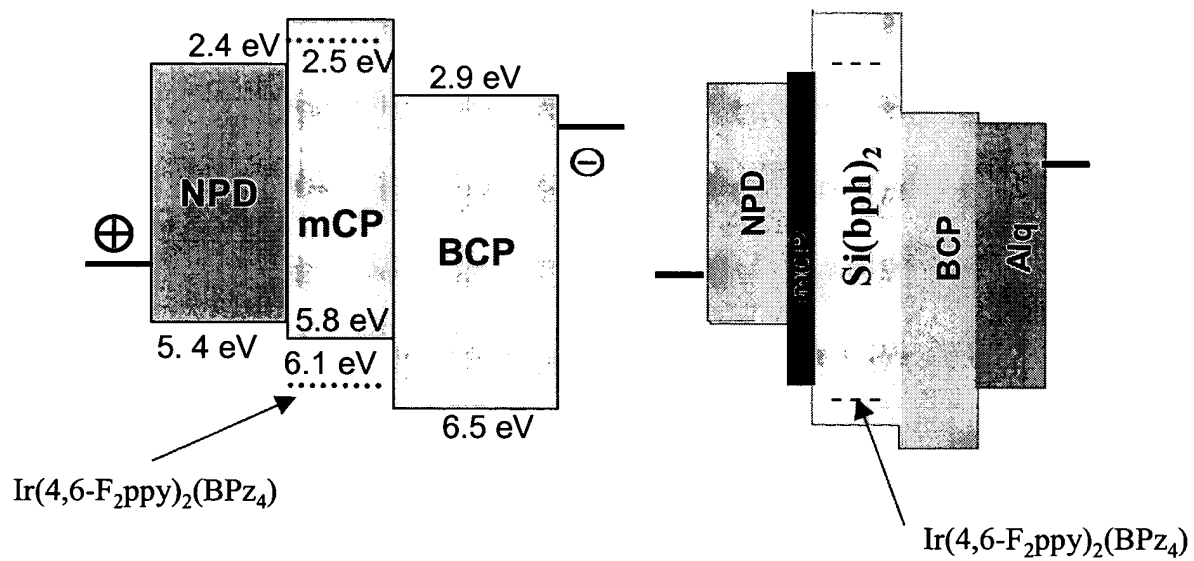


Figure 13

Device Structure:

ITO/NPD(400Å)/mCP(100Å)/Ir(4,6-F₂ppy)₂(BPz₄):host(8-9%, 250Å)/
BCP(150Å)/Alq(250Å)/LiF/Al

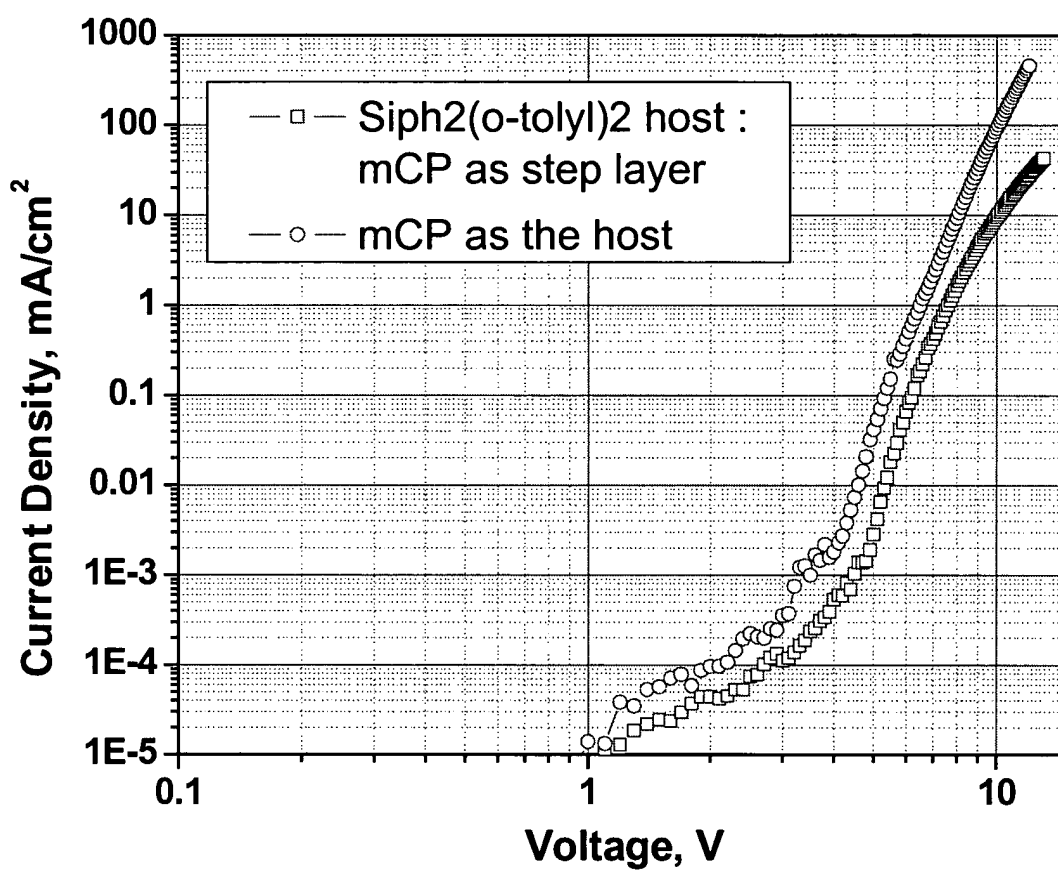


Figure 14

Device Structure:

ITO/NPD(400Å)/mCP(100Å)/Ir(4,6-F₂ppy)₂(BPz₄):host(8-9%, 250Å)/
BCP(150Å)/Alq(250Å)/LiF/Al

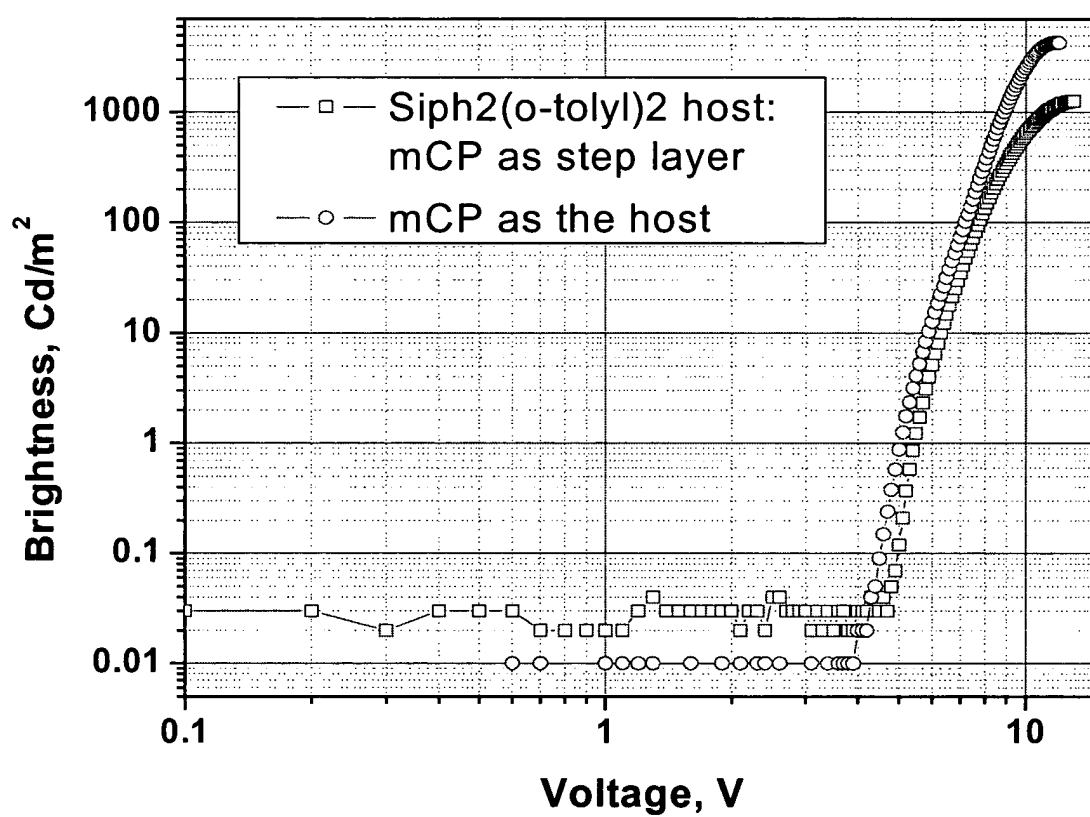


Figure 15

Device Structure:

ITO/NPD(400Å)/mCP(100Å)/Ir(4,6-F₂ppy)₂(BPz₄):host(8-9%, 250Å)/
BCP(150Å)/Alq(250Å)/LiF/Al

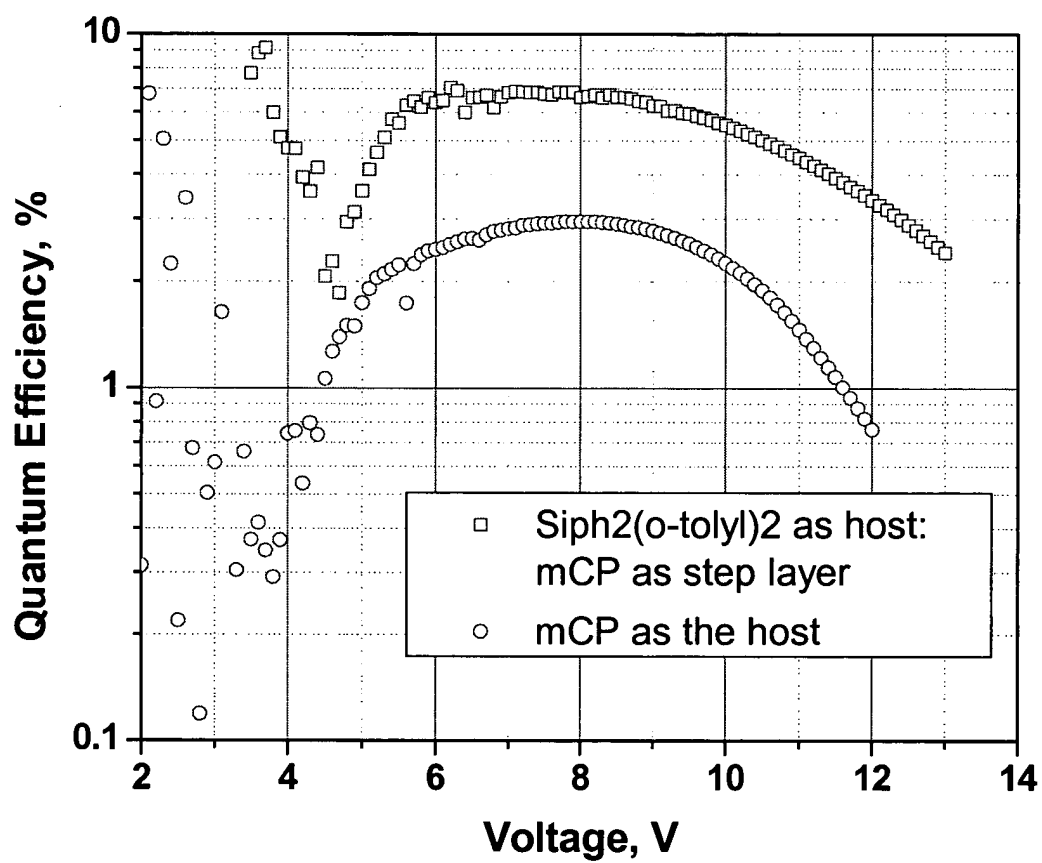


Figure 16

ITO/NPD(400Å)/mCP(100Å)/Ir(4,6-F₂ppy)₂(BPz₄): Si(bph)₂(250Å)/
BCP(150Å)/Alq(250Å)/LiF/Al

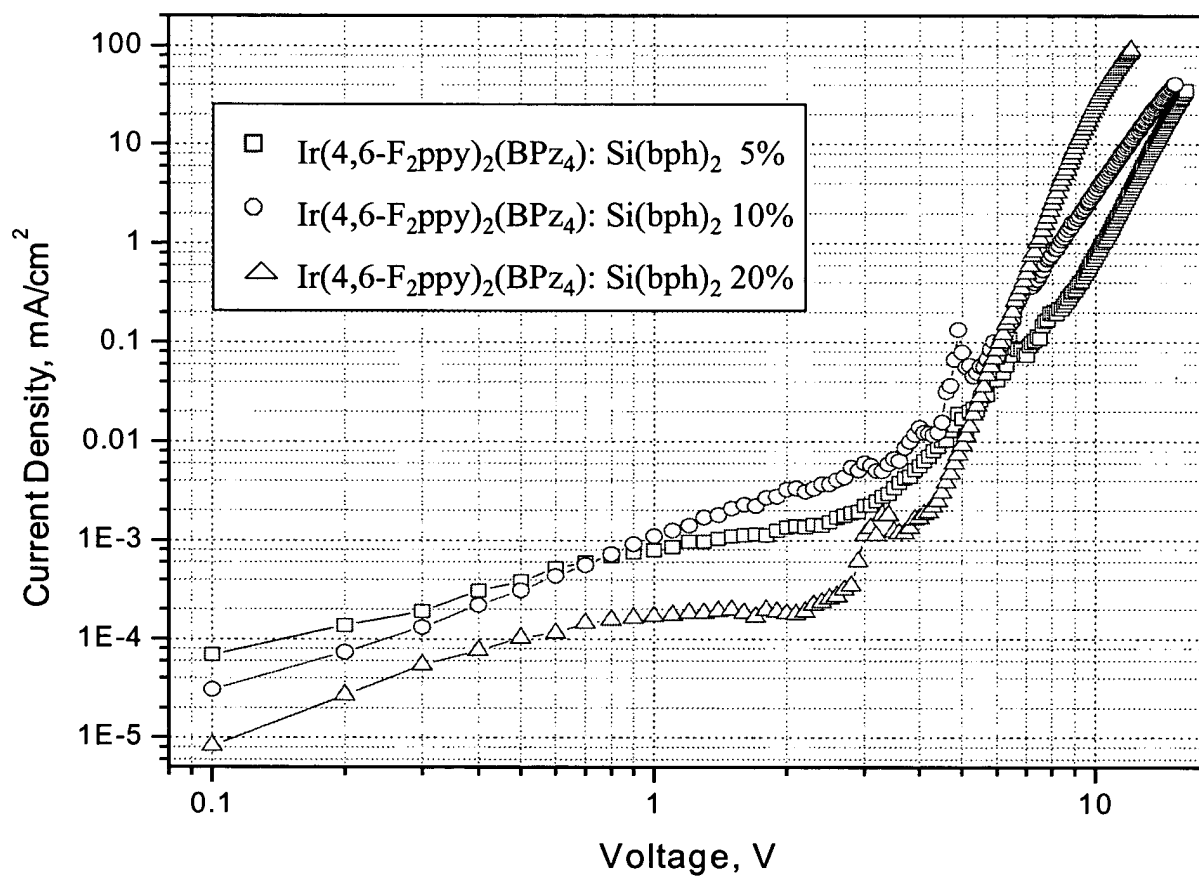


Figure 17

ITO/NPD(400Å)/mCP(100Å)/ Ir(4,6-F₂ppy)₂(BPz₄): Si(bph)₂ (250Å)/
BCP(150Å)/Alq(250Å)/LiF/Al

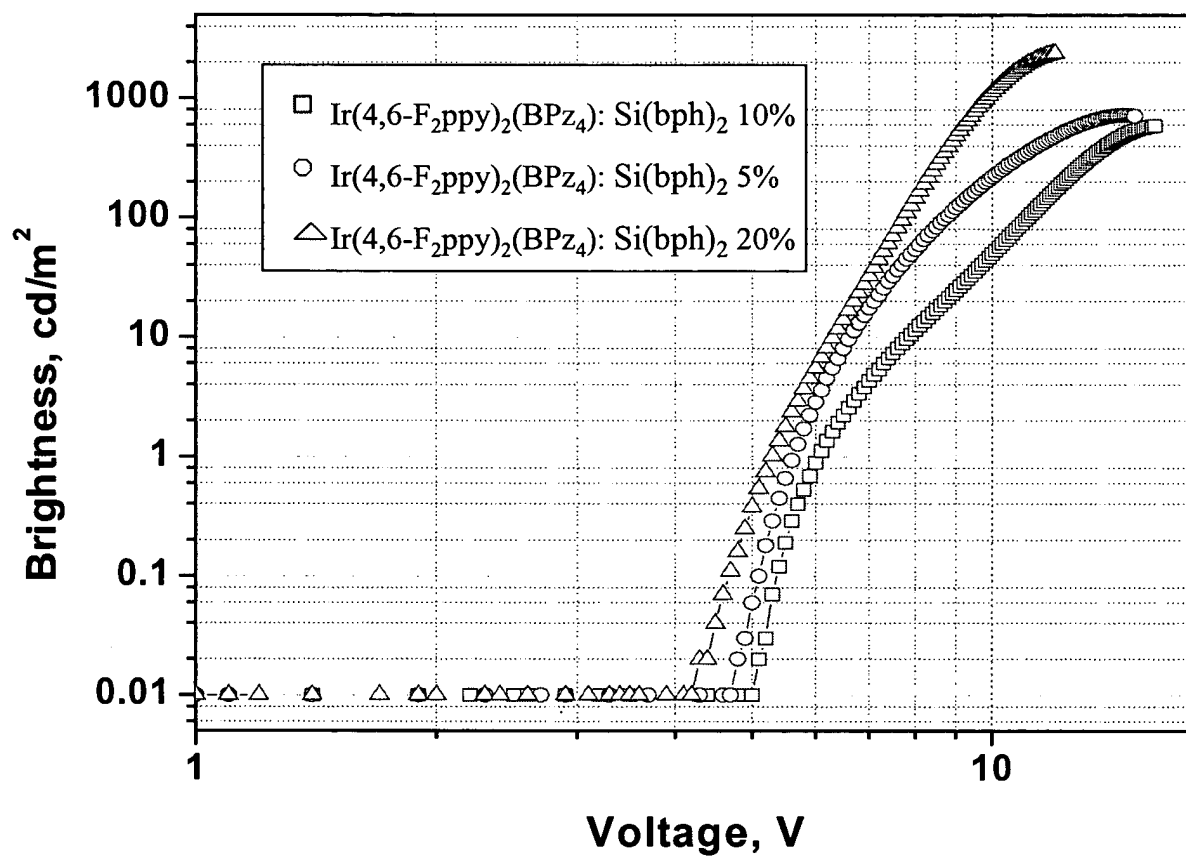


Figure 18

ITO/NPD(400Å)/mCP(100Å)/Ir(4,6-F₂ppy)₂(BPz₄): Si(bph)₂ (250Å)/
BCP(150Å)/Alq(250Å)/LiF/Al

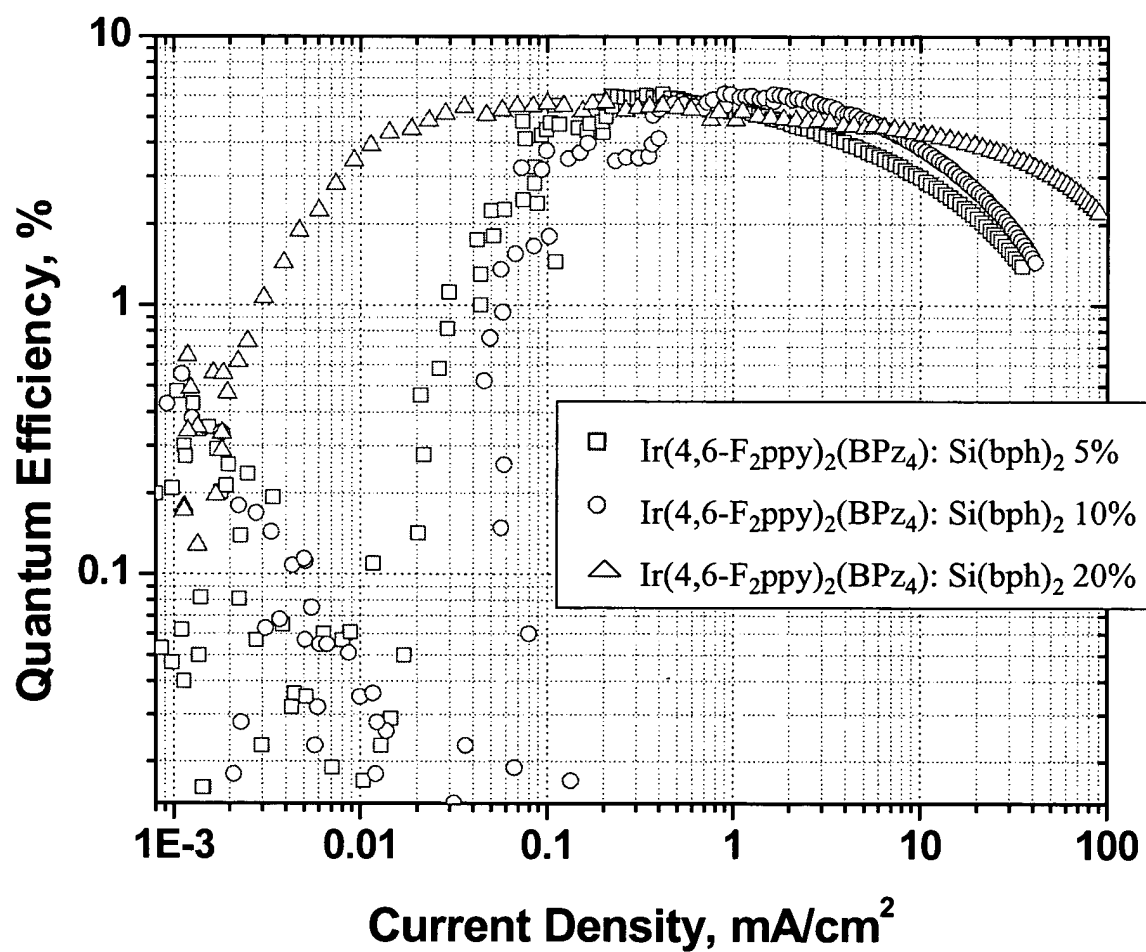


Figure 19

ITO/NPD(400Å)/mCP(100Å)/Ir(4,6-F₂ppy)₂(BPz₄): Si(bph)₂(250Å)/
BCP(150Å)/Alq(250Å)/LiF/Al

Device Spectra of 5%, 10%, 20% Ir(4,6-F₂ppy)₂(BPz₄): Si(bph)₂

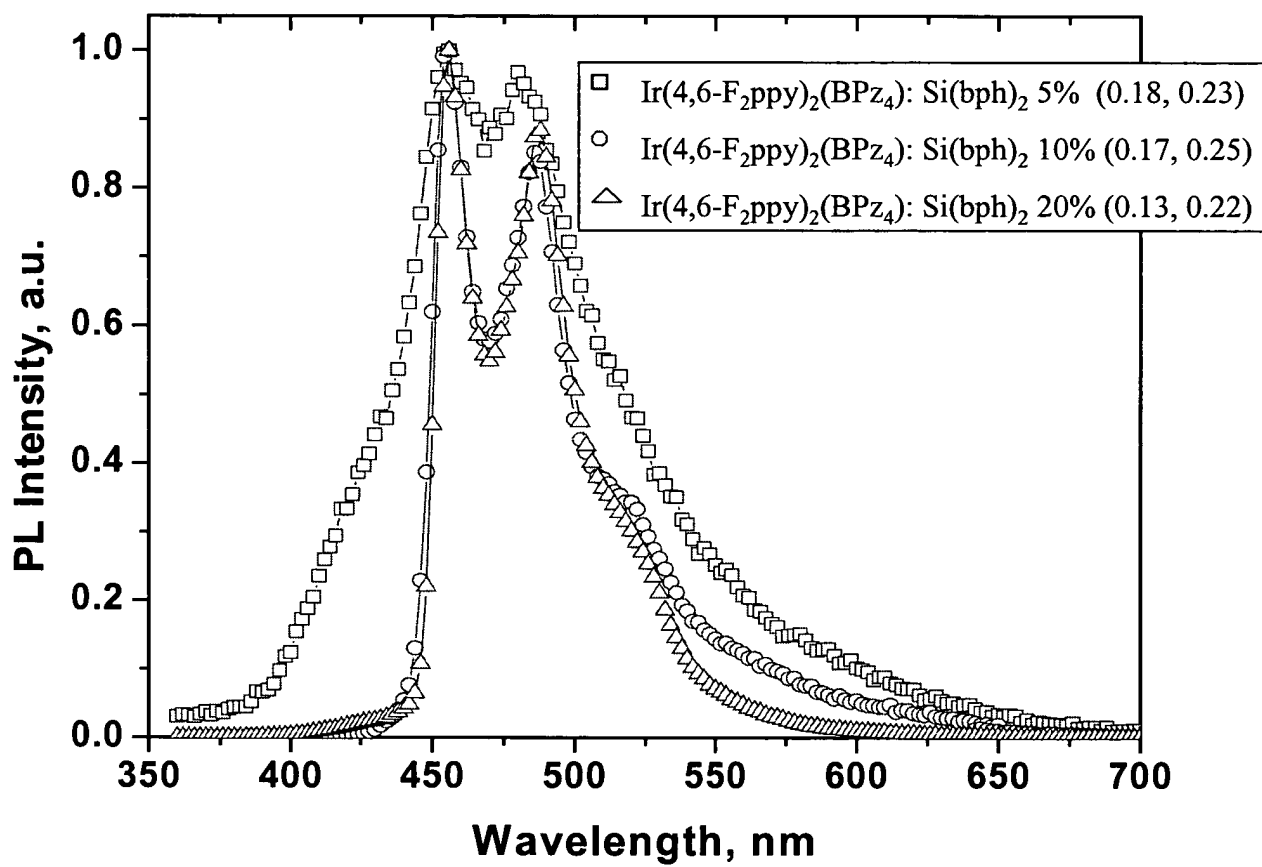


Figure 20

Devices:

ITO/NPD(400Å)/FIrpic: Si(bph)₂ (300Å)/BCP(150Å)/Alq(250Å)/LiF/Al

ITO/NPD(400Å)/mCP/ FIrpic:Si(bph)₂(300Å)/Alq(250Å)/LiF/Al

ITO/NPD(400Å)/FIrpic:mCP(300Å)/Alq(250Å)/LiF/Al

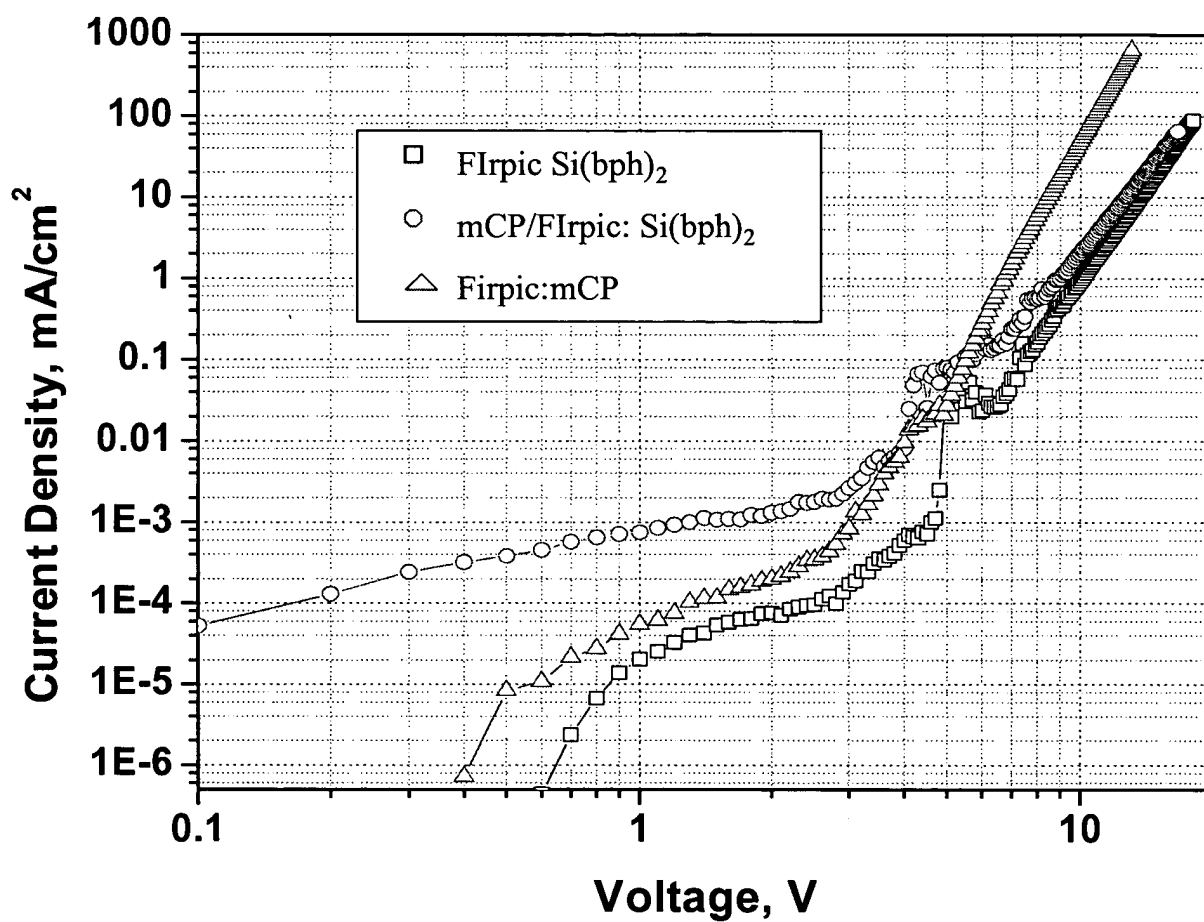


Figure 21

Devices:

ITO/NPD(400Å)/FIrpic:Si(bph)₂(300Å)/BCP(150Å)/Alq(250Å)/LiF/Al

ITO/NPD(400Å)/mCP/ FIrpic:Si(bph)₂(300Å)/Alq(250Å)/LiF/Al

ITO/NPD(400Å)/FIrpic:mCP(300Å)/Alq(250Å)/LiF/Al

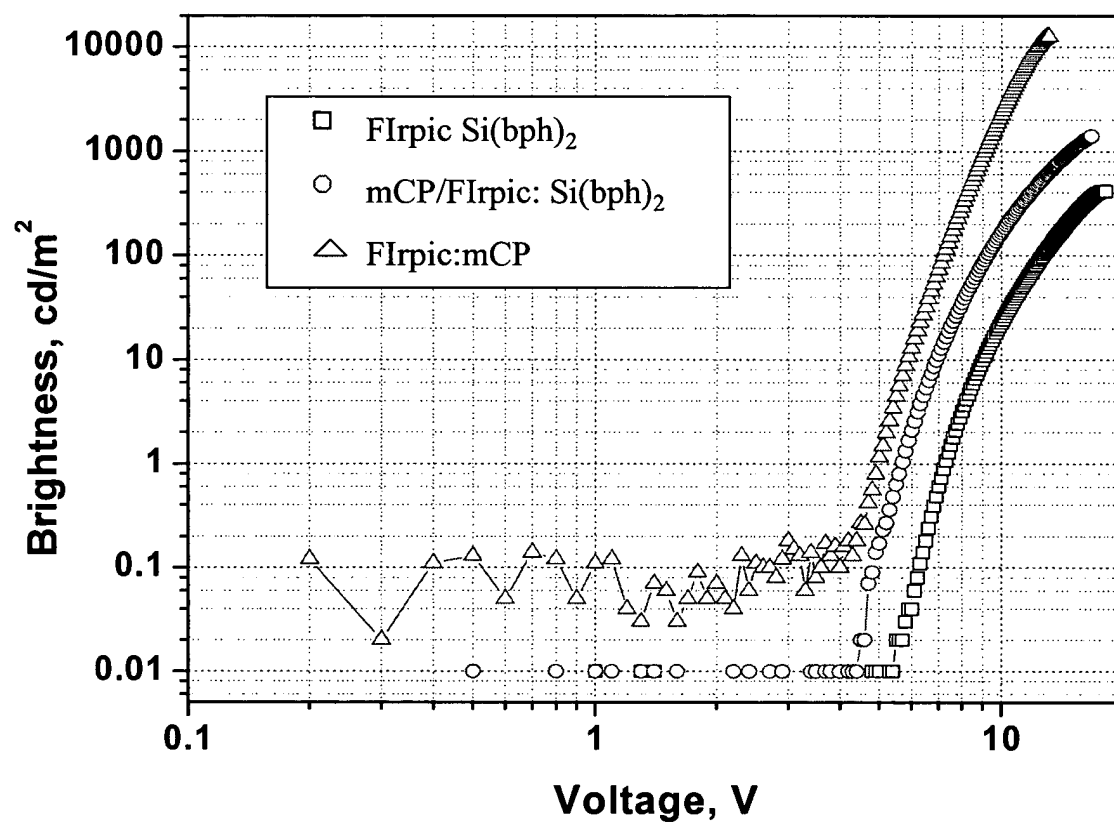


Figure 22

Devices:

ITO/NPD(400Å)/FIrpic:Si(bph)₂(300Å)/BCP(150Å)/Alq(250Å)/LiF/Al

ITO/NPD(400Å)/mCP/ FIrpic:Si(bph)₂(300Å)/Alq(250Å)/LiF/Al

ITO/NPD(400Å)/FIrpic:mCP(300Å)/Alq(250Å)/LiF/Al

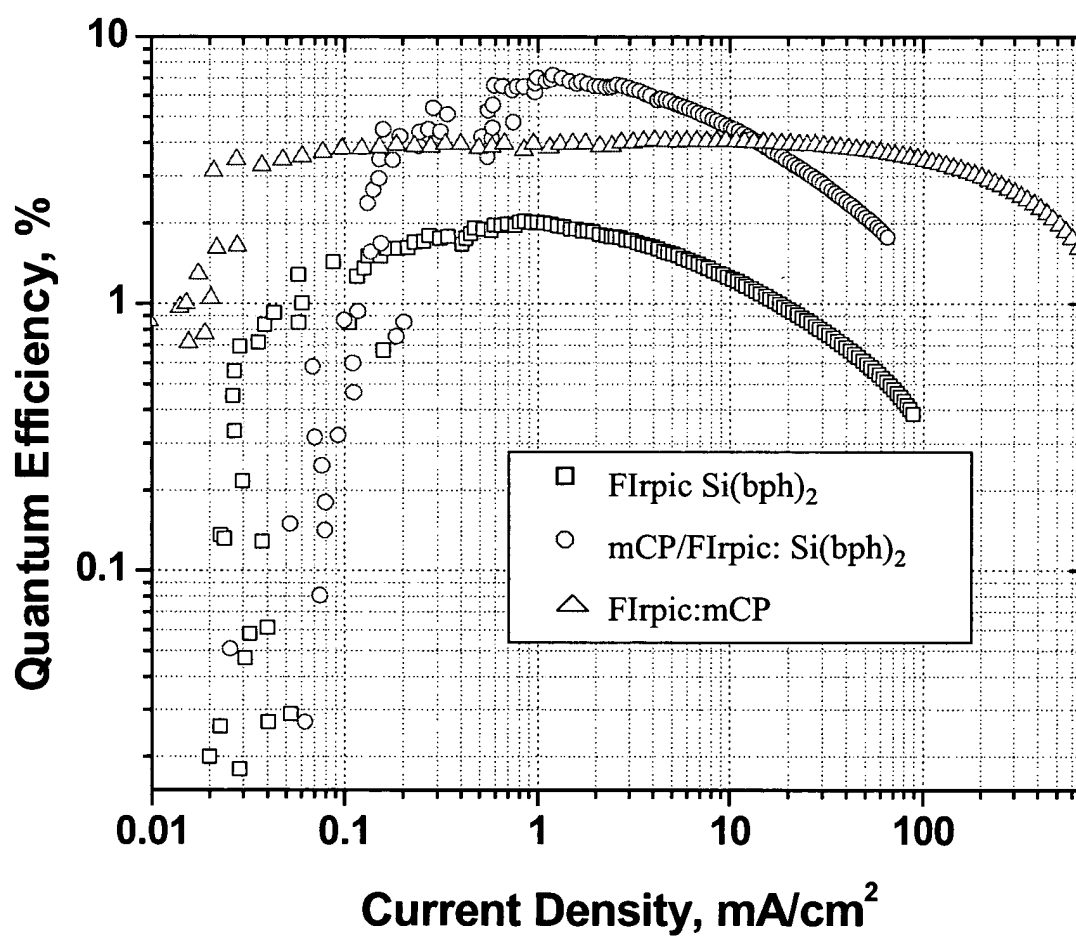


Figure 23

Devices:

ITO/NPD(400Å)/mCP/ FIrpic:Si(bph)₂(300Å)/Alq(250Å)/LiF/Al

ITO/NPD(400Å)/FIrpic:mCP(300Å)/Alq(250Å)/LiF/Al

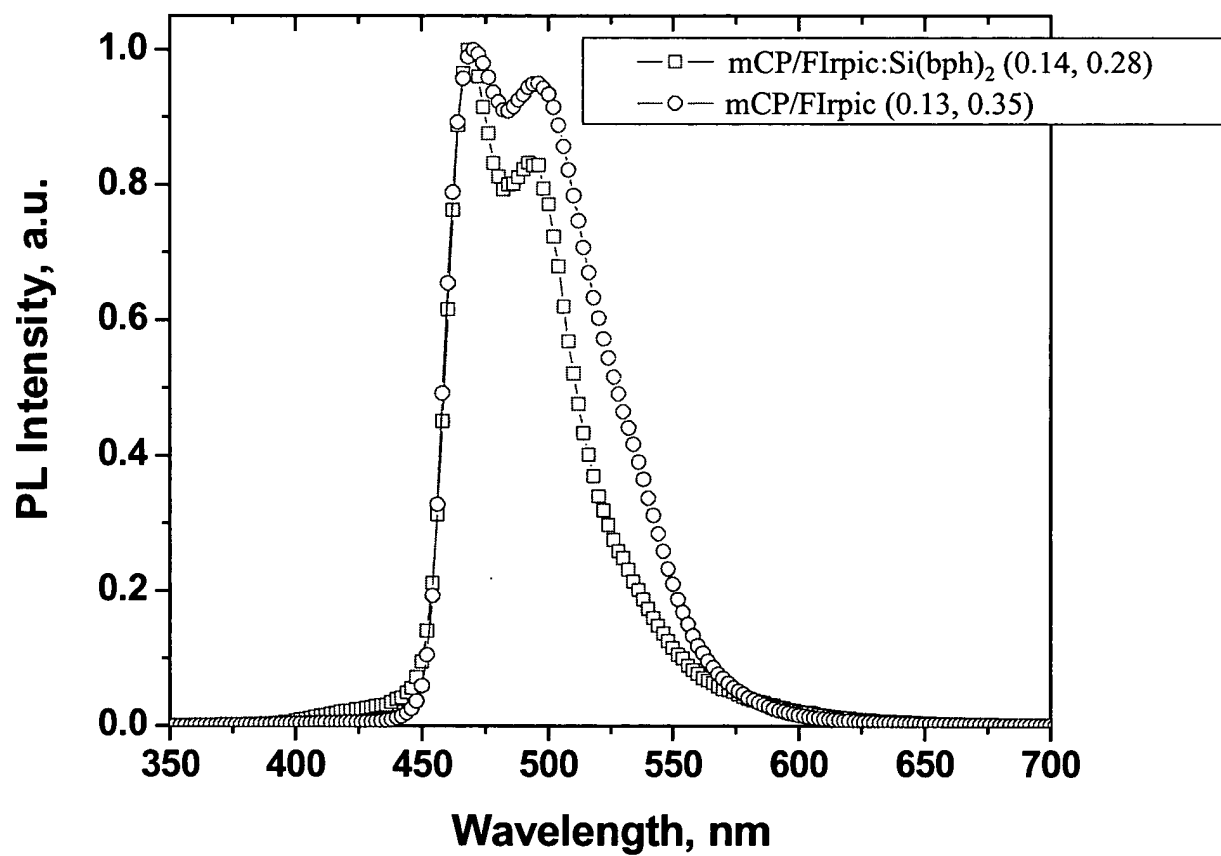


Figure 24

Abs/Em 9,9-Spirobissilaanthracene

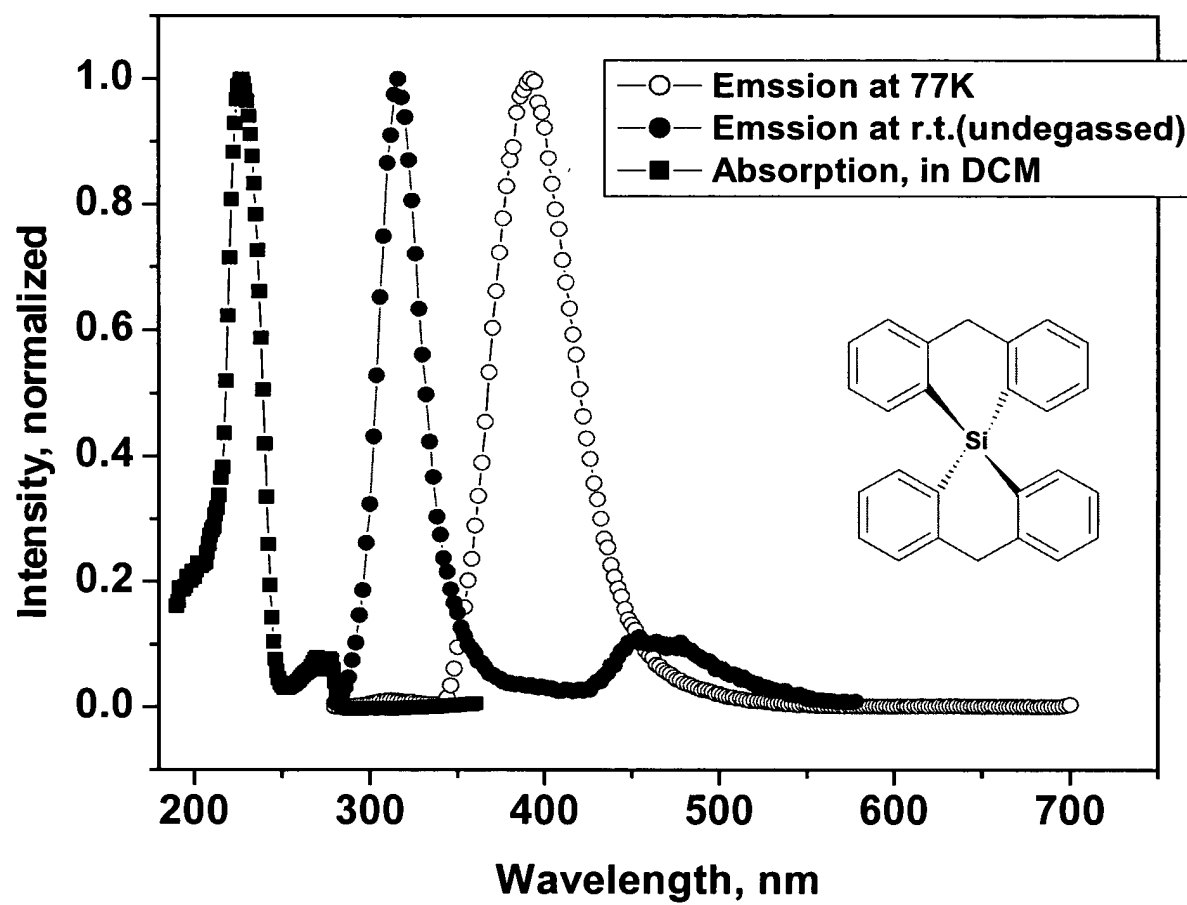


Figure 25

OctaPhenyl-Polyhedral Oligomeric SilSesquioxane

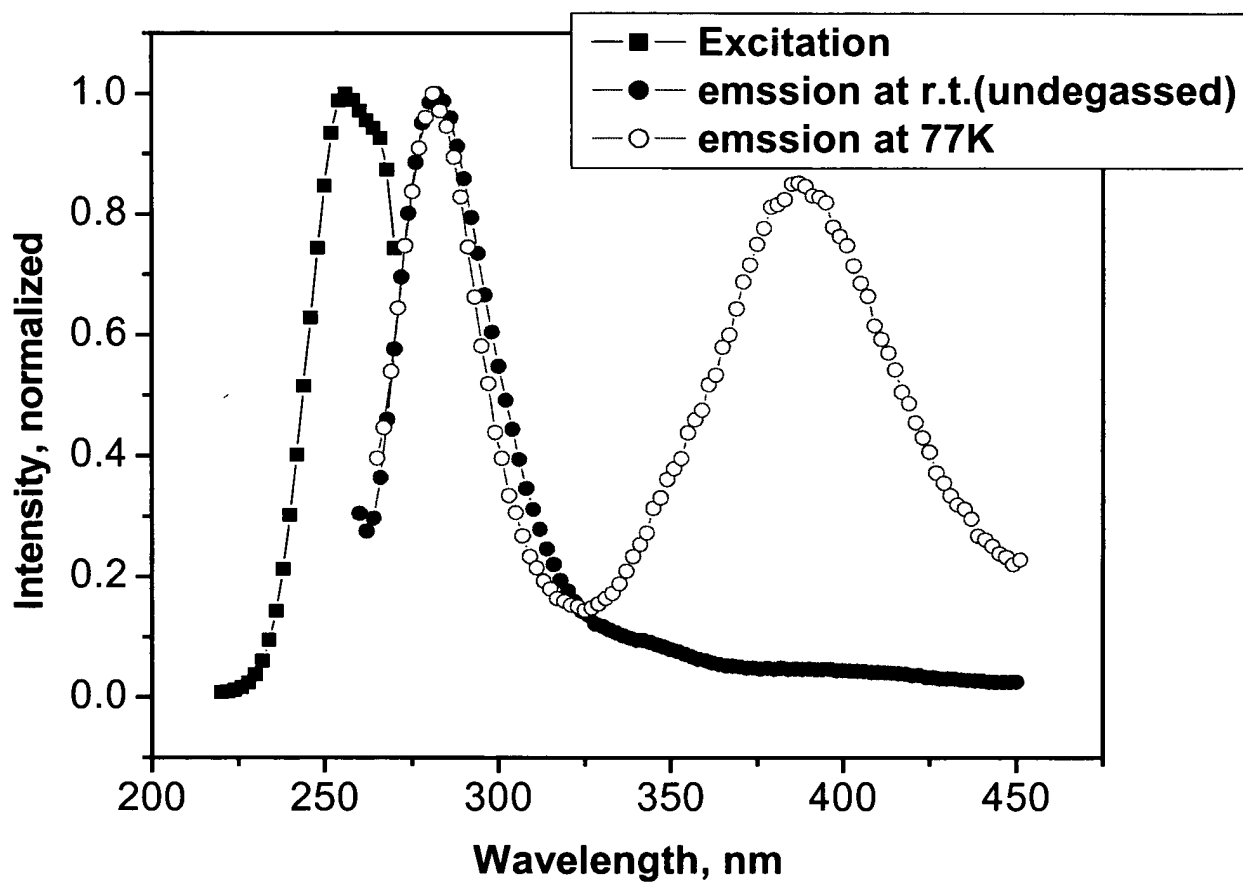


Figure 26

ITO/NPD(400Å)/mCP(100Å)/Ir(4,6-F₂ppy)₂(BPz₄):Siph₂(o-tolyl)₂(10%, 250Å)/
BCP(400Å)/LiF/Al

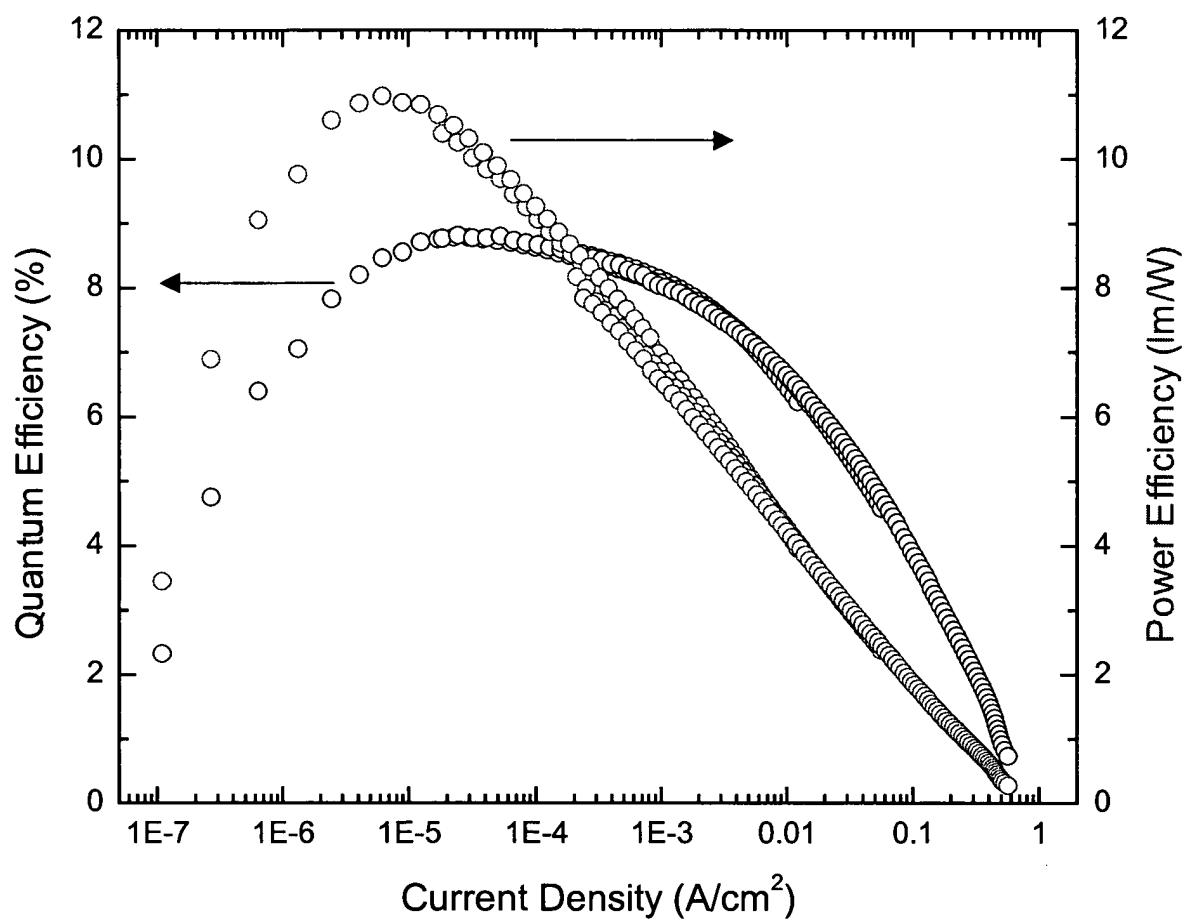


Figure 27

ITO/NPD(400Å)/mCP(100Å)/Ir(4,6-F₂ppy)₂(BPz₄):Siph₂(o-tolyl)₂(10%, 250Å)/
BCP(400Å)/LiF/Al

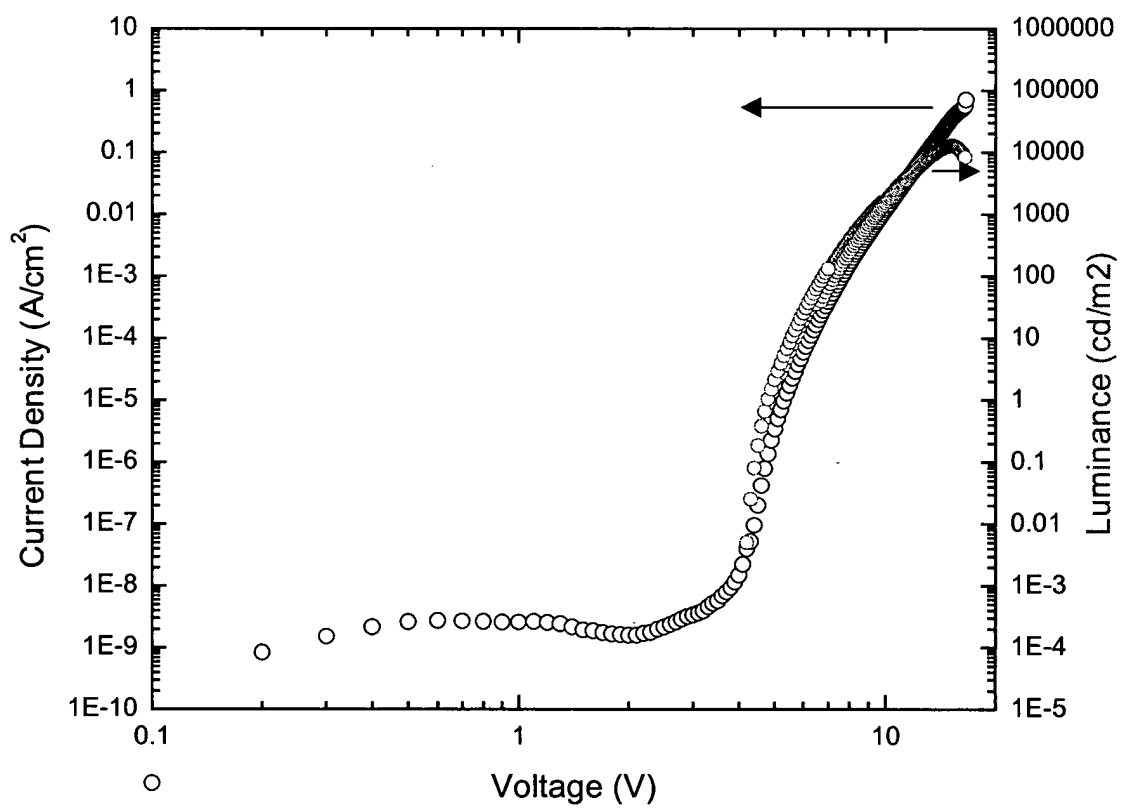


Figure 28

ITO/NPD(400Å)/mCP(100Å)/Ir(4,6-F₂ppy)₂(BPz₄):Siph₂(o-tolyl)₂(10%, 250Å)/
BCP(400Å)/LiF/Al

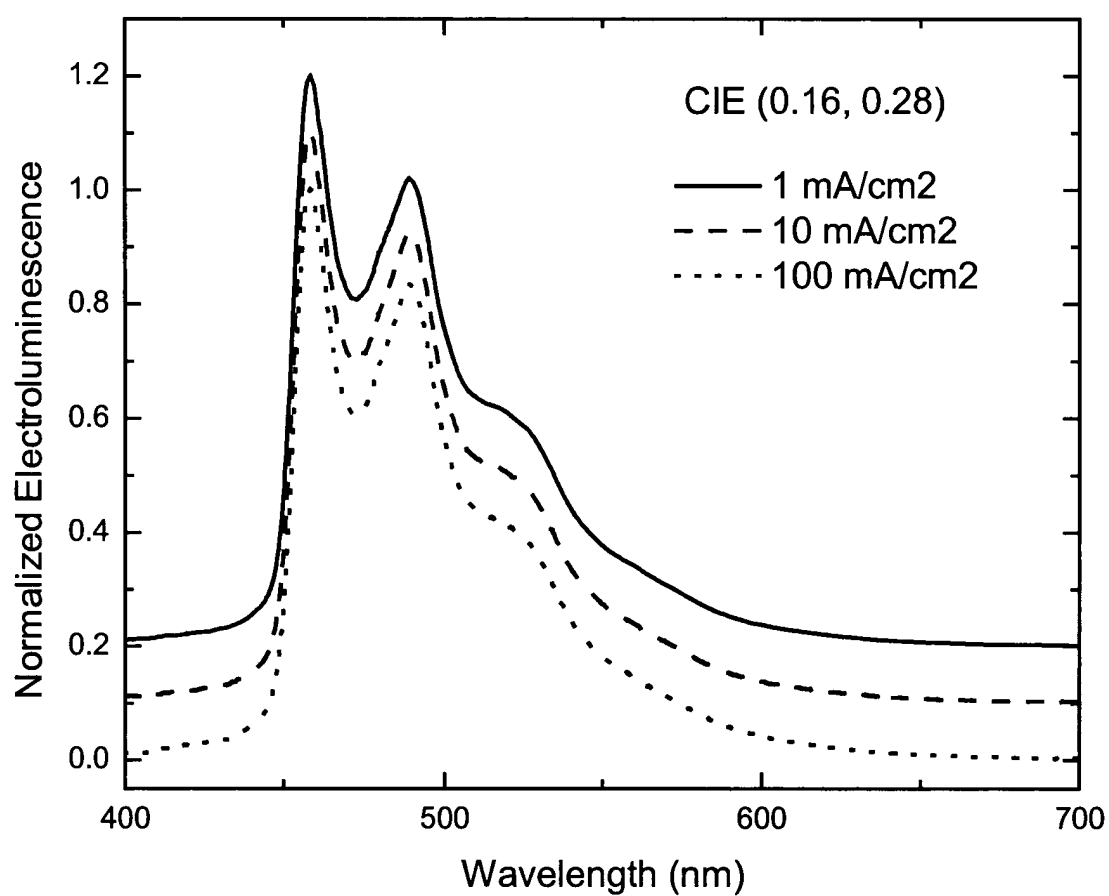
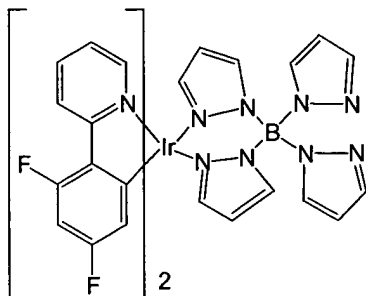
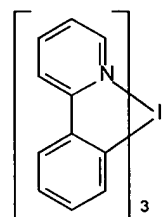


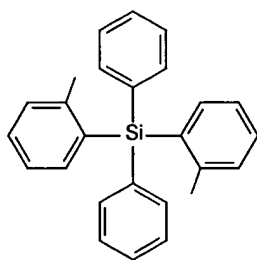
Figure 29



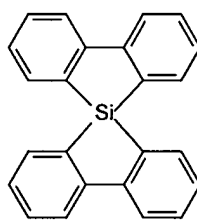
$\text{Ir}(4,6\text{-F}_2\text{ppy})_2(\text{BPz}_4)$



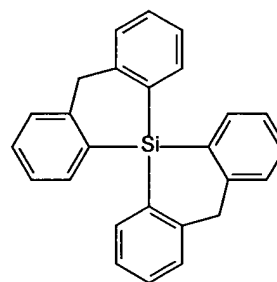
Irppy



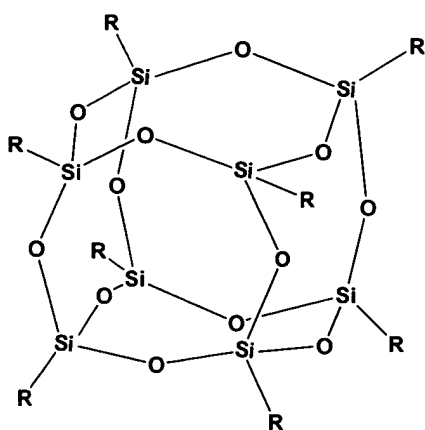
$\text{Siph}_2(\text{o-tolyl})_2$



5,5'-Spirobi(dibenzosilole)

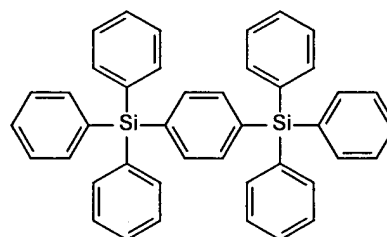


9,9-spirobissilaanthracene



R: Phenyl

octaphenyl-polyhedral oligomeric silsesquioxane



$p\text{-(SiPh}_3)_2\text{Ph}$

Figure 30

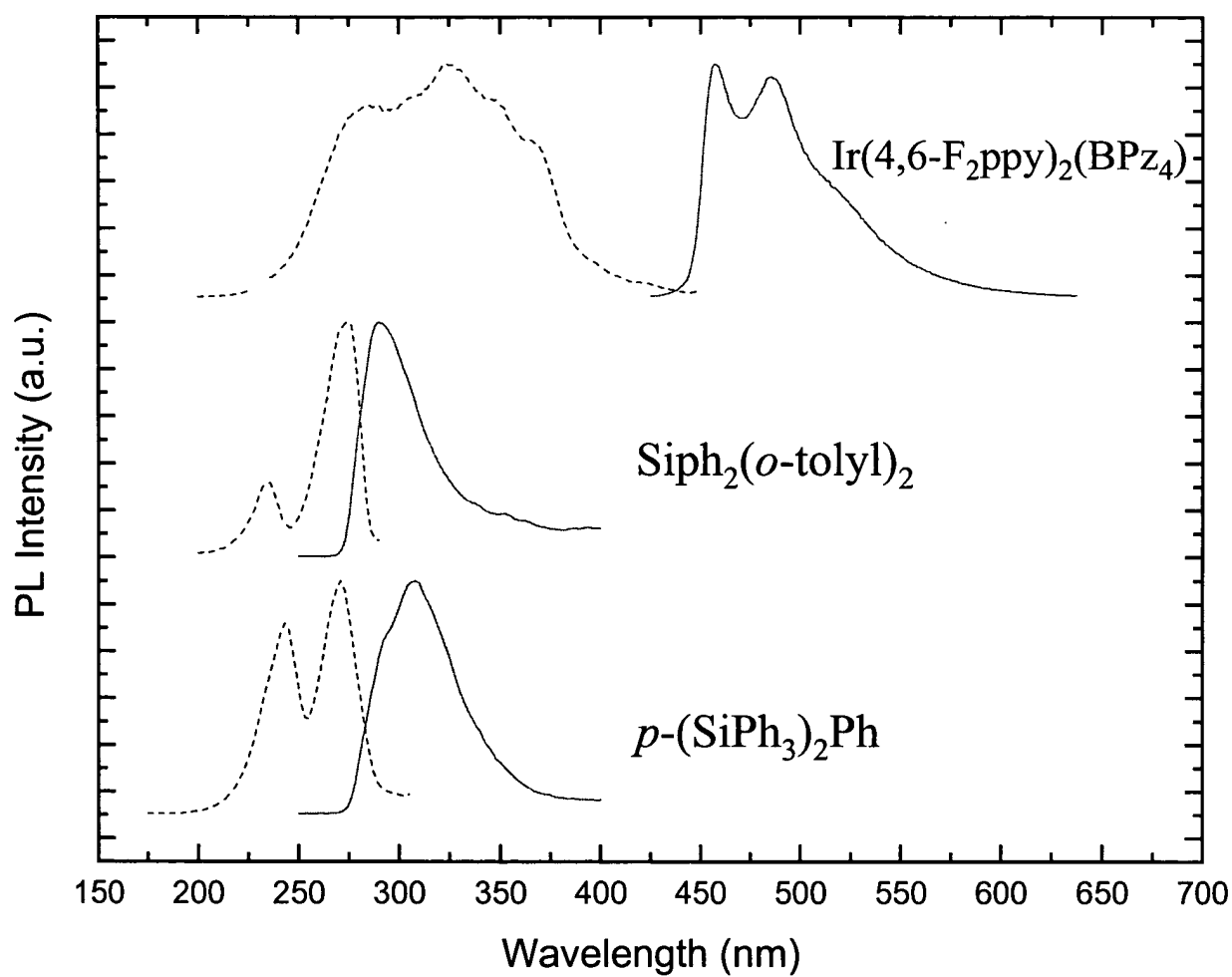


Figure 31

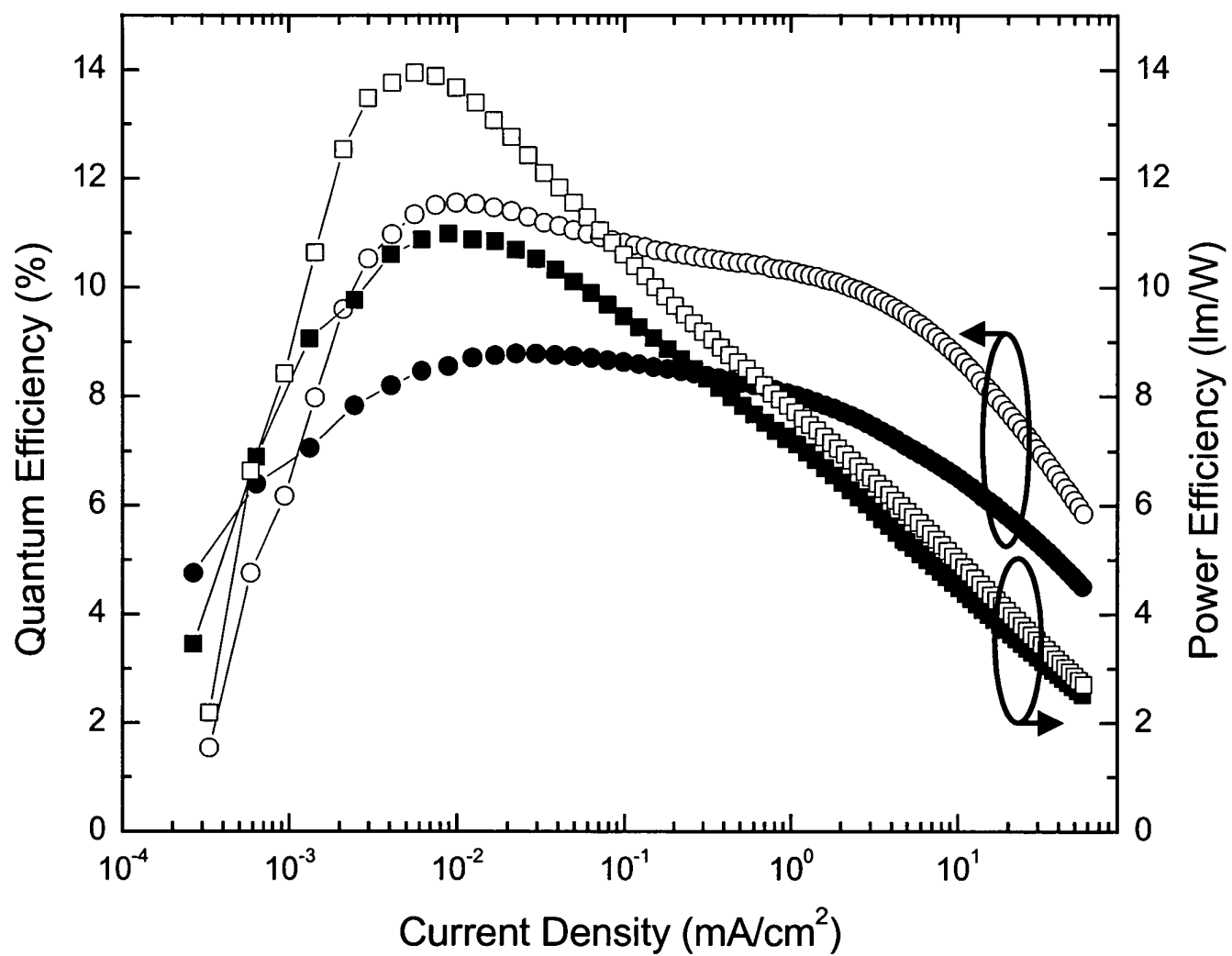


Figure 32

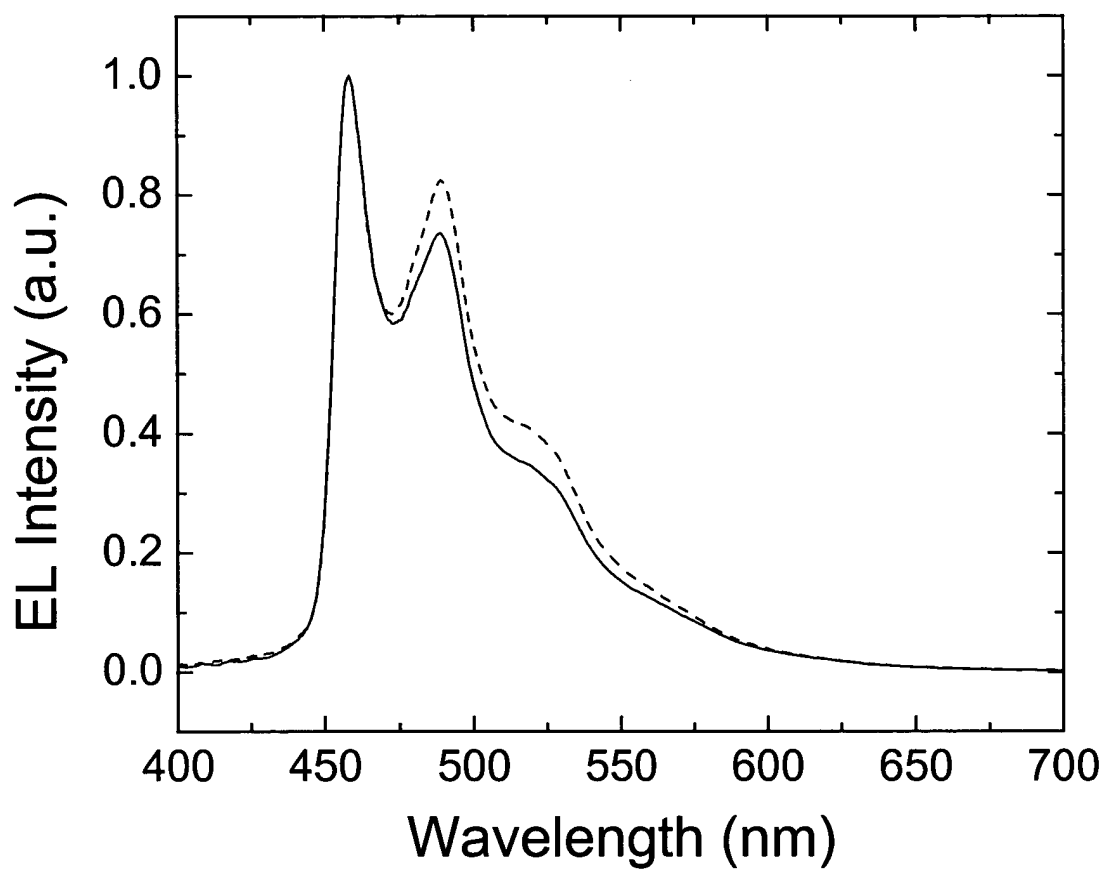


Figure 33

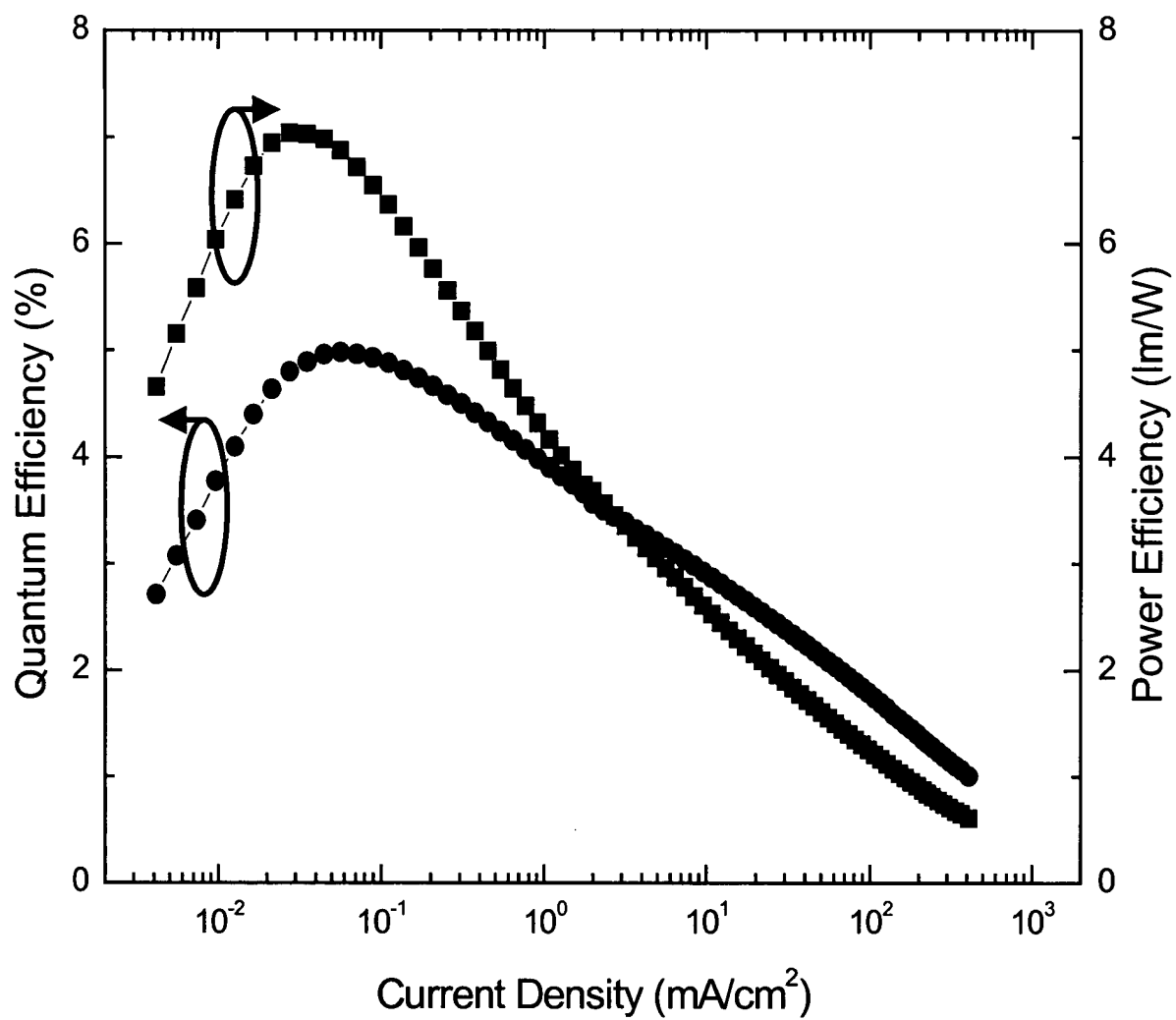


Figure 34

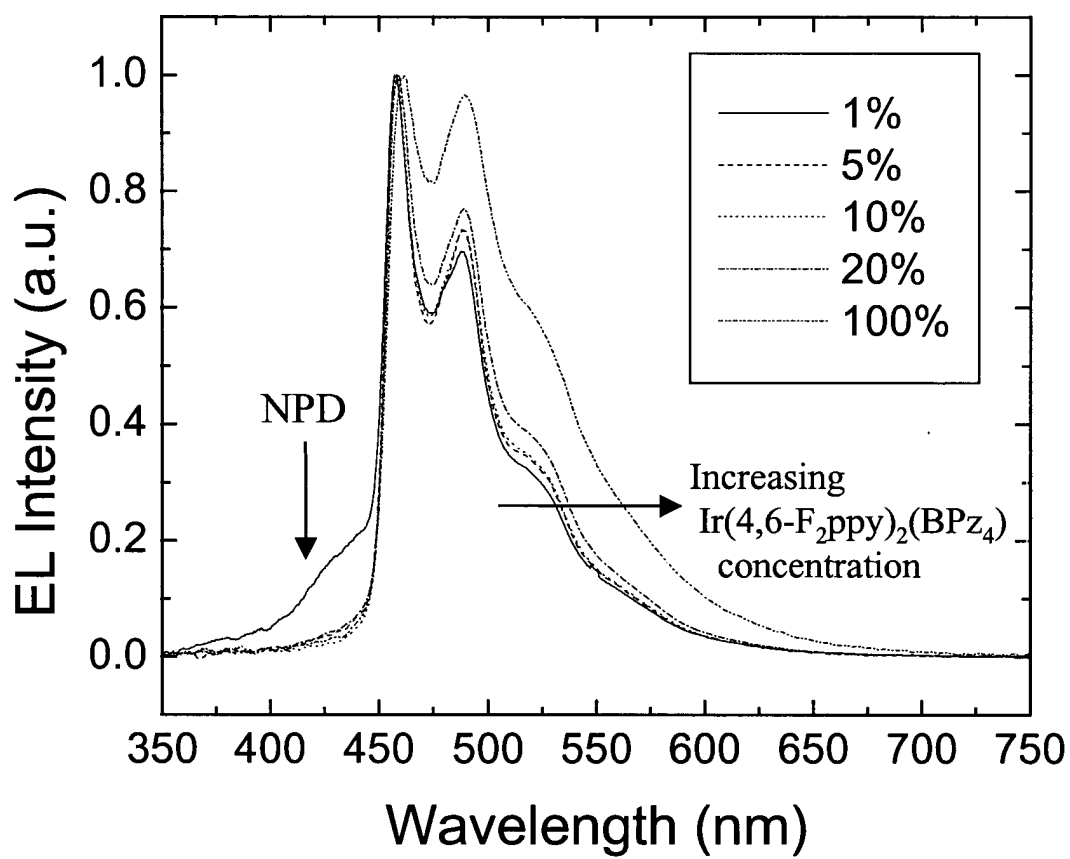


Figure 35

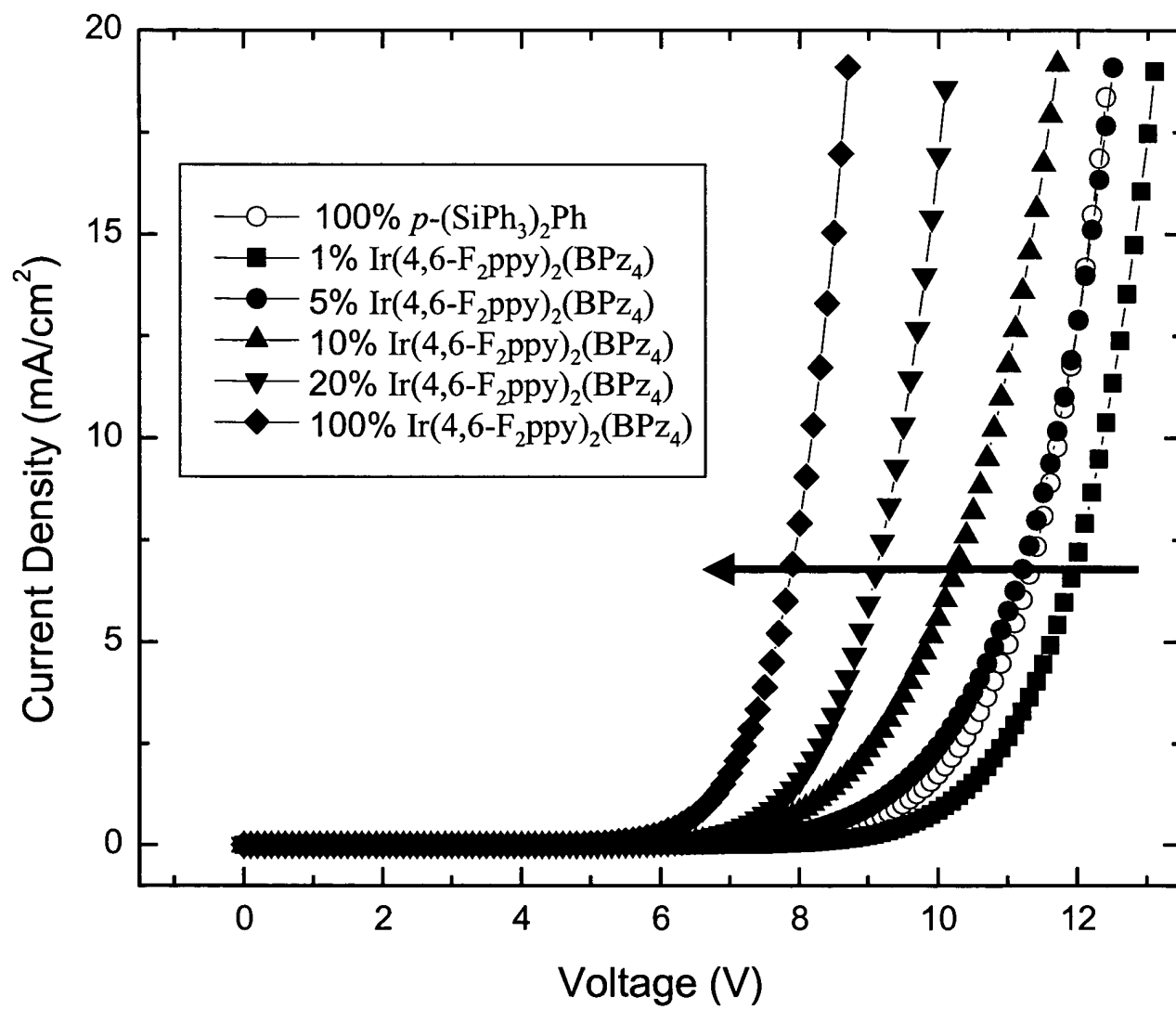


Figure 36

